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A Survey of the Literature on Artistic Behavior in the Abnormal:

III. Spontaneous Productions

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A SURVEY OF THE LITERATURE ON ARTISTIC BEHAVIOR IN THE ABNORMAL:

III. SPONTANEOUS PRODUCTIONS *

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CHAPTER I

INTRODUCTION

THE artistic productions of the abnormal are of psychological interest insofar as they may further an understanding of the nature of artistic behavior and imaginative activity in general. As in other types of behavior, the artistic activities of the insane may represent normal activity in exaggerated, distorted, or simplified form. It is from this point of view that we wish to examine the available material on insane art. It should be pointed out that the term "artistic" is here employed in its most inclusive sense, with no implication of aesthetic evaluation. By artistic behavior we simply mean the subject's performance in such activities as drawing, painting, modeling, music, or writing, regardless of the merit or value of the product.

In a previous survey (1), the writers have traced briefly the development of interest in the artistic behavior of the abnormal and sketched the history of psychological research on this problem. The various approaches to this problem were outlined in a second article (2). The *psychological* approach, which is of relatively recent origin, can be differentiated from the artistic and the psychiatric. The *artistic* approach is concerned primarily with the possible aesthetic value of the abnormal product and especially with such aspects as the creation of novel and "interesting" effects by the patient, or the resemblances between abnormal art works and certain schools of art. The *psychiatrist*, on the other hand, looks upon the artistic production of the insane as an objective and concrete manifestation of the mental disorder and examines it with a view to its *diagnostic* value. Some psychiatrists have also explored artistic activity as a *therapeutic* device. Both of these approaches have frequently yielded material which proved useful for

* This survey is part of a project on the artistic behavior of the insane, conducted by the writers under the auspices of the Columbia University Council for Research in the Social Sciences. The data obtained by the writers in their own investigations have not been included in the present literature survey, but will be reported in subsequent publications.

psychological study. The second article also includes a discussion of what might be termed "borderline problems," *i.e.*, the extensive body of literature dealing with the *interrelationships* between the work of the insane and that of children, primitive groups, folk artists, and special schools of modern and fantastic art, together with a brief consideration of the problem of genius and insanity in art. Certain related topics, such as "trance," mediumistic, and other automatic productions, as well as the work of prisoners, also contribute toward a broader understanding of the problem, and will be treated in subsequent articles.

With the exception of a relatively small number of "*experimental studies*" which we have discussed elsewhere (3), the large majority of data on insane art have been obtained through the observation of the *spontaneous productions* of patients in mental hospitals. These productions represent work done by the patients of their own volition, with no guidance or direction from others. Such products should therefore be distinguished from the directed and more or less routine work done in occupational therapy, which does not concern us here. In most cases, the patients were furnished with relatively meager materials which they could use as they wished or leave untouched. In some instances, materials were supplied only upon the patient's own request. In several cases, no suitable materials were available, the patients displaying remarkable ingenuity in devising or adapting materials for their purposes.

A number of investigations have been conducted as *group surveys*, usually on the patients within a single institution, but a still larger number are *case studies* of individual patients who appeared to be worthy of study. In the majority of cases, a certain amount of information about the individual is available to help in the evaluation of the finished product. Although the variety of the products obtained is almost unlimited, the large majority are *drawings* or *paintings*. Various forms of *needlework* are common among the women patients. A smaller number of products fall within the *plastic arts*, such as carving, sculpture, and various forms of modeling. Curious *architectural* constructions have been described in a few cases. In the field of *musical* production, material is relatively meager. *Literary* productions, including poetry, essays, diaries, letters, and other prose compositions, are quite plentiful, a number having also been published by the patients from time to time. Each of these fields will be surveyed in turn in the sections which follow. Purely theoretical articles, as well as literature surveys and discussions of insane art in general psychiatric handbooks, have been excluded from the present survey but will be found in the article on historical and theoretical background (1).

CHAPTER II

COLLECTIONS AND EXHIBITS

THE scope of interest aroused by the spontaneous productions of institutionalized psychotics can be gauged in part by a survey of the collections and exhibits of such works which have been recorded. One of the earliest of these collections is that assembled by Lombroso (113), and exhibited at the Museum of Psychiatry and Criminal Anthropology of the University of Turin. The most extensive and varied collection described in the literature is that of Prinzhorn (159, 161) at the psychiatric clinic of Heidelberg, which contained material obtained throughout Europe. Prinzhorn was a pioneer in the psychiatric as well as psychological study of spontaneous drawings by the insane, and his book describing the Heidelberg collection is one of the most widely quoted sources in the field. An exhibition of insane art held at Frankfort in 1921 under the auspices of Prinzhorn and the psychiatric department of Heidelberg University attracted widespread attention among artists and the general public, as well as in psychiatric circles (cf., e.g., 16).

In England, as early as 1880, Winslow (223) described a collection of drawings assembled by the superintendent of a mental hospital which received patients almost exclusively from the "educated classes." The drawings, including work in pencil, ink, water color, chalk, sepia, and oil, produced over a period of twenty years, were arranged into three large volumes. The first volume contained 55 pencil portraits of patients, all produced by a former engraver. The second volume consisted of 124 products by a number of patients, all but two of whom had never been professional artists. In the third volume were included specimens of the work of five patients, some showing successive stages in the development of the psychosis. In 1900, Hyslop (84) exhibited a collection of about 600 works done by the patients at Bethlem Hospital. And in 1913 widespread comment was aroused in medical and artistic publications, as well as in the popular press, by an exhibition of insane art held in London (15). More recently, an exhibit of drawings and paintings executed by the former ballet dancer Nijinsky, while in a Swiss sanitarium, was held in London (19).

A number of similar exhibits have been held in France (17, 18, 119). In discussing one of these exhibits, Marie (119) of the *Asile de Villejuif*

mentions a large number of private collectors who submitted specimens, in addition to his own extensive collection. In the same article, he refers to exhibits of insane art held at the psychiatric sections of International Congresses in Berlin in 1913 and in Moscow in 1914. Vinchon (214) cites the collections of Chambard and Sérieux, in addition to that of Marie, all of which have been repeatedly discussed in the literature. In his book on the writings and drawings of the insane, Rogues de Fursac (170) refers to the extensive collection of Thivet, many of the specimens which he discusses being taken from this collection. Hospital (80) speaks of a large collection of products by the insane, including drawings, writings, poetry, and manufactured objects, which he had accumulated over many years.

Several hundred products by the insane were included in a "psychiatric museum" founded in Budapest in 1928 (227). Evenson (58) refers to an exhibit of the art of mental patients held in connection with the Sixth Congress of Scandinavian Psychiatrists in Stockholm in 1935. Karpov (91) in Russia has collected drawings and literary compositions by the insane over a period of about 15 years. Reviewing a book by Dr. Cesar Osario, Marie (120) describes a collection of insane art products assembled by the author at the asylum of Iucquiry, in Sao Paulo, Brazil. In a book on psychopathic drawing, Delgado (48) describes his extensive collection at Lima, Peru. Over 1000 reproductions of drawings from this collection were sent to the Psychiatric Clinic of Heidelberg University.

In America, a number of hospitals for the insane have accumulated sizeable collections of the spontaneous products of their patients. Unlike European collections, however, these are almost always limited to specimens obtained in a single institution; they have rarely been exhibited, and are very infrequently described in the literature. Reference to collections of drawings and other objects obtained at Saint Elizabeths Hospital in Washington, D. C., is made by Kempf (92), Lewis (110), and Lind (20). Vaux (207) describes a collection of articles produced by patients at Central Islip State Hospital, Central Islip, New York, and exhibited in 1929 at the convention of the American Occupational Therapy Association. Sample drawings by a few patients from Longview Hospital in Cincinnati, Ohio, were exhibited at the 1937 meeting of the American Association for the Advancement of Science. Schube* has accumulated approximately 7000 spontaneous productions by patients at Boston State Hospital, Boston, Massachusetts, over a period of several years. An exhibition entitled *Art and Psychopathology* was held in New York City from October 24th to

* Reported in personal communication to the writers. See also (185).

November 10th, 1938, under the joint auspices of the Psychiatric Division of Bellevue Hospital and the Federal Art Project of the W.P.A. This included 106 specimens of paintings and drawings made by children, adolescent, and adult patients of both sexes in the psychiatric wards of Bellevue Hospital. Three conferences were held in connection with this exhibit, of which two dealt with the psychiatric and artistic implications of such work, respectively (cf. 21, 22, 23, 24, 64, 197). A collection of more than 1100 spontaneous drawings by patients in over 50 institutions in different parts of the United States has been assembled by the writers, and will be discussed in subsequent papers.

Mention may also be made of other exhibits of insane products recently held in this country from a purely artistic point of view. In 1932, a series of over 50 drawings made by the former Russian ballet dancer, Nijinsky, while confined in a Swiss sanitarium, were exhibited in New York City (25). In 1935, a number of drawings from the Szecsi collection (181) were exhibited at the Midtown Galleries, in New York City. The items in this collection had been selected by Szecsi, the well-known French art connoisseur, from the collections of Prinzhorn and Marie and from the asylums of Villejuif and Saint Anne in France. Similarly, a few art products by the insane were included in the comparative material of the exhibition of fantastic art, dada, and surrealism conducted in 1936 by the Museum of Modern Art in New York City (30).

CHAPTER III

DRAWING AND PAINTING

1. *Group Surveys*

Since investigations on drawing and painting by the insane are relatively numerous, they have been classified for convenience into *group surveys* and *case studies*. These two types of studies can usually be differentiated not only on the basis of number of subjects, but also in terms of their general approach. The group surveys are usually concerned with the characterization of insane art in general or the discovery of differentia of the artistic products of different clinical types. The case studies, on the other hand, give a somewhat fuller analysis of the individual patient with a more elaborate case history and a more thorough effort to correlate the details of the products with specific characteristics of the individual and his background. It should be added that the large majority of studies in both categories contain reproductions of sample drawings by the patients, some of the articles being profusely illustrated. These reproductions, a number of which are in color, often furnish even more useful data than the accompanying discussion, since the latter may have been influenced by the writer's special interests and bias.

One of the earliest efforts to describe the characteristics of drawings by the insane is to be found in the writings of the French psychiatrist Max Simon (191, 192). Basing his observations on drawings by 14 cases, Simon suggested differentiating features of the different types of disorder. Thus he reports that patients suffering from delusions of persecution made elaborately executed and often symbolical drawings of their delusions. The drawings by manics showed chaos and confusion and unnatural use of color. Those by megalomaniacs were clear, ordered, logical, and coordinated in their execution and often comprised ambitious projects such as maps, city plans, etc. The work of the general paralytics showed inadequacy of representation, great exaggeration, and the use of insignificant, naïve, and simple drawings to represent grandiose ideas; these drawings were frequently untidy and covered with spots. The dementia praecox produced incoherent, inconsistent, and childlike drawings. The feeble-minded were likewise childlike in their drawings and frequently resorted to imitation. Obscenity was common in the insane drawings in general, but most frequent among the nymphomaniacs. Simon exerted a wide-

spread influence upon later investigators; for many years the search for diagnostic indices, which he initiated, was the keynote of studies on insane drawings.

Another pioneer worker in this field was Lombroso (111, 113, 114). Combining his own material with that furnished to him by several psychiatrists, he accumulated data on 108 insane patients with artistic tendencies. Within this group, the largest number, 46, were interested in painting, 11 in engraving, and the remainder in sculpture, music, architecture, and poetry. The clinical diagnoses were, in decreasing order of frequency: sensorial and persecutorial monomania, dementia praecox, megalomania, acute or intermittent mania, melancholia, general paralysis, moral insanity, and epilepsy. Geographically, Lombroso found that insane artists tended to come from artistically gifted districts. He points out, however, that in only a few cases could the artistic tendencies of the patients be explained by profession or previous artistic training. Thus only 8 of his subjects had been painters or sculptors before the onset of insanity, and an additional 10 had been architects, carpenters, or cabinet-makers. He suggests that insanity facilitates artistic activity in former non-artists, although former artists will not necessarily improve after insanity. His point of view is illustrated in the following statement: "Their imagination, freed from all restraint, allows of creations from which a more calculating mind would shrink for fear of absurdity and because intensity of conviction supports and perfects the work" (113, p. 184).

Lombroso cites many instances to show the influence of the specific form of insanity upon the nature of the drawings, especially in the choice of subject matter. Among the other characteristics of insane drawings, he discusses: originality, which often tends to become mere bizarreness and eccentricity; symbolism; the mingling of writing and drawing*; minuteness of detail; atavisms, illustrated by lack of perspective, disproportion of hands and feet, and a number of other characteristics reminiscent of prehistoric art; arabesques and ornaments of a stylized, geometrical nature; obscenity, found especially in the work of erotomaniacs, paretics, and dementia praecox, and illustrated by the case of a patient who painted a penis at the tip of every tree in his drawings, and by a former cabinet-maker who carved the same motif at every corner on furniture. Choice of insanity as a subject for drawing was also noted in certain cases. Uselessness often characterized the patient's work, as in the case of a paranoiac

* Similarly, in his book on handwriting, Lombroso points out that the introduction of drawing in writings is especially pronounced among monomaniacs, who have in mind images which they cannot adequately describe in words and therefore resort to drawings (112, p. 145).

who spent years decorating egg shells and lemons. Absurdity, either in drawing or in coloring, was common. Uniformity and stereotypy within the work of a single individual were frequently noted. Imitation, with minute accuracy of detail, was especially common among the feeble-minded.

Within the same decade, Winslow (223) discussed briefly some of the general characteristics of a collection of drawings assembled by the superintendent of a mental hospital whose patients were drawn largely from the upper educational levels. Among the subjects portrayed, he lists flowers, landscapes, and most frequently, copies of paintings or engravings from memory. Imaginative and fantastic or unintelligible drawings are also recorded. One former engraver produced numerous sketches of his fellow inmates, illustrating various forms and phases of psychosis, and described in many cases as striking likenesses of the patients. The gradual change in drawing style with the advance of psychosis was vividly illustrated by the work of a landscape painter suffering from general paralysis. Beginning with carefully and delicately executed scenes, successive specimens show the rapid decline in his work until it becomes a scarcely decipherable scrawl.

In his book on disorders of language among the insane, Séglas (186) includes a section on drawings. He believes that such drawings can be definitely separated into those which are related to the psychosis and those which are independent of it. Dismissing the latter as of no psychological interest, he discusses the former in terms of the differentiating characteristics of the different clinical syndromes. Descriptions and illustrations are given of the drawings by paranoiacs, manics, dementia praecox, paretics, and feeble-minded. Rogues de Fursac (170), in his book on writing and drawing in nervous and mental diseases, devotes one chapter to drawing. He makes the same distinction as Séglas between those drawings which are related and those which are unrelated to the patient's mental condition. Unlike Lombroso, he maintains that true artistic talent in the sense of aesthetic appreciation and creative ability is not found in the psychoses proper, but only in constitutional psychopathy and intermittent disorders. In discussing those drawings which he regards as directly related to the patient's morbid tendencies and preoccupations, he finds: erotic and mystic representations; pretentious or bizarre ornaments; infantile caricatures; the portrayal of hallucinations and illusions, either from memory or at the time of their occurrence, by a sort of automatism; representation of delusions, as in the case of religious mania; and incoherent or absurd drawings, the incoherence appearing either in the subject matter and interpretation, or in the execution, as in disorders of perspective or proportion. He mentions

the types of mental disorder most commonly manifesting each of these characteristics, although from his data these distinctions do not appear to be very sharply delineated.

In an article surveying all forms of artistic production by the insane, Hrdlička (81) describes the drawings observed by him in several New York State institutions for the insane, feeble-minded, epileptic, and criminal insane. He, too, states that manifestations of high talent are rare among the insane and that the products were generally poorer than those by the same person before the onset of psychosis. He adds that artistic and literary production is largely limited to paranoiacs and chronic manics. With reference to subject matter, he found many drawings of a symbolical and allegorical nature; supernatural and fabulous creatures; religious objects; obscene representations; designs of "inventions," such as perpetual motors; and manufactured "paper money" of various sorts. The execution of the drawings was often elaborate, but at the same time lacked detail and fine points, some drawings resembling those of children. As a rule, the objects drawn were those which played a large part in the morbid mental life of the patient. Some patients were so anxious to draw that when paper was not available they drew on the walls or any other available surface. Men were inclined to draw more often than women. Epileptics rarely drew, and such drawings as they made were usually either religious or obscene, with simple figures and relatively little symbolism. The insane criminals drew very little, producing crude sketches in which symbolism was very prevalent. The feeble-minded hardly ever drew, although they could be taught to do so.

Basing his observations on specimens of drawings by patients in Portuguese asylums, Dantas (44) concluded that such products can have no artistic value and are only of psychiatric interest. Only in a few cases of individuals who had had previous training did he find any evidence of artistic skill. As an example of this he cites the case of a paretic patient who produced a gouache which bore a close resemblance in style to classical Greek sculpture. Even in such cases, however, the author found that the ability does not last, but deteriorates soon after the onset of psychosis. Dantas maintains that insanity, producing a sort of aesthetic anaesthesia as well as motor incoordination, makes the production of good art impossible. In discussing the drawings by paranoiacs, he characterizes them as grotesque, baroque, deformed, devoid of equilibrium and coherence, and showing a tendency to symbolism and allegory.

Réja (166, 167) has written extensively on insane art, basing his observations on his own collection as well as on the material accumulated by a

number of other French psychiatrists such as Améline, Luys, Marie, Sérieux, and Toulouse. He aligns himself with those who maintain that psychic disorders may lead to the appearance of a fairly complex artistic activity. Thus he found that individuals who had had previous training in technique frequently produced work of real artistic merit and originality after the onset of their psychosis. For example, a former commercial artist who used to design conventional flower patterns for textiles began, after commitment, to produce curious, decorative, and delicate water colors very similar to Japanese landscapes. A former engraver began to produce drawings of the human figure with grossly exaggerated muscles and other disproportions, although the general aesthetic effect was very pleasing and the execution skilful. In the case of certain patients, the drawings were realistic and technically coherent, but they expressed bizarre ideas, showed a violent or fantastic use of color, or portrayed strange facial expressions. It was in the decorative and stylized drawings, however, that the insane artists most frequently excelled. In cases of extreme mental deterioration, to be sure, the drawings were crude and childlike even when the patient had previous artistic training.

Among the patients who had received no previous artistic training, products of real aesthetic merit were relatively rare. Pleasing effects were sometimes obtained in decorative drawings in which the patient made no attempt to imitate real objects, and thereby circumvented his lack of technical equipment. The repetition of a relatively simple geometric design or the use of vivid colors in unusual combinations might create a pleasing artistic effect, resembling primitive or folk art in what Réja terms its "charming awkwardness." In a few cases, the untrained person might adopt an individual graphic formula for the portrayal of real objects, or might develop skill in the representation of a single subject to which he limited himself. An example of the latter was a patient who painted exclusively water colors of cavalry charges and with practice became quite adept at the realistic portrayal of horses and soldiers.

In discussing imagination in insane art, Réja reports the frequent use of superficial resemblances in the materials, similar to the use of the natural shape and grain of wood or jade which one often finds in Oriental art. The insane artist would frequently make use of pictures in clouds or smoke, spots on paper, and other fortuitous arrangements. Among the other points discussed by Réja may be mentioned the combination of writing and drawing, the writing often being very ornate; disorders of perspective; geometric and stylized designs; violent and bizarre use of color; and curious ingenuity in the use of materials, as illustrated by a patient who painted decorations

on the bellows of a sort of accordion, thereby obtaining curious perspective effects when the bellows was compressed and expanded. Among the drawings were also to be found the usual number of plans of imaginary cities, one patient naming the streets in his cities with medical and pharmaceutical terms, such as "*Rue Embarras-Gastrique*."

In a survey of the problem of insane art from the standpoint of methodology, Mohr (130) discusses illustrative cases of spontaneous drawings which he observed. In the schizophrenic drawings he finds mannerisms, absurdities, oddities, silliness, symbolism, and evidence of the progressive deterioration of the personality. Whereas in the earlier stages of schizophrenia, one could make out some meaning in the drawing, this was impossible in the more advanced stages. Writing, of an equally dissociated nature, was occasionally found with the drawings. There was also a tendency to portray the gruesome, probably resulting from hallucinations of frightening content. Drawings made during the later stages of schizophrenia were characterized by repetition and perseveration, the patient drawing the same object and from the same view in endless monotony. Drawings depicting delusions were found among paranoiacs. One drawing produced by a manic depressive patient just at the transition from the manic to the depressed phase revealed manic hyperactivity in the complete filling in of all available space, while its content, a mourning angel hugging a cross, suggested the incipient depression.

Kürbitz (99) discusses spontaneous as well as directed * drawings by the insane, and considers the former more indicative of the specific type of psychosis than the latter. He points out that in some cases, however, such drawings may show no symptoms of insanity. Among the specific abnormal characteristics, he mentions: stiffness; perseveration; chaotic organization; ideoplastic rather than physioplastic representation, as in making invisible objects visible; and lack of integration, as in the picture of a house with another story added above the roof, or that of a tree growing out of a housetop.

Näcke (138) reports that artistic expression is rare among the insane, only about 1/2 per cent of insane patients from the lower socio-economic classes producing drawings spontaneously. He seems to be generally skeptical of the value of such drawings, pointing out that comparisons with drawings made by the same person before the onset of insanity would be necessary, and that only in acute stages of an attack can signs be found which are of diagnostic value, the incipient and convalescent stages yielding nothing characteristic.

* For a discussion of the results obtained with directed drawings, see (3).

In a study of the relationship between drawing and writing, Morgenthauer (133) found 77 cases of "transition products" combining the two forms of expression. He found more transitions from writing to drawing than *vice versa*, and considers this a regression to a more primitive level of expression. In another study (134), the same author asked three patients to draw their hallucinations. One patient with delusions of persecution drew his enemies as figures seen in light halos. The second drew images which he had seen during a fit of coughing, probably elicited by the visual effects of blood going to the head while coughing. The third drew pictures which Morgenthauer attributed to prolonged after-images. Morgenthauer uses these three cases as illustrations of his theory that all hallucinations have a peripheral origin, the stimulus being perceived in terms of the patient's emotional complexes.

Sigg (190) describes drawings by senile cases, the number of subjects not being stated. He finds clear evidence of organic symptoms, such as motor incoordination, in these drawings. He also reports disproportion of parts and perseveration. The latter is illustrated especially by chain drawings of the human figure, in which the leg of each person serves as the neck or arm of the next. In a series of case studies of feeble-minded patients at Vineland Training School, Doll (49, pp. 84, 114, 175) refers briefly to spontaneous drawings, and reproduces sample products by three patients. Two of these patients drew common objects, such as star, heart, man, house, stop-watch; the third drew maps and astronomical objects, such as Saturn, Jupiter, and the Earth.

Hutter (83) describes many specimens of schizophrenic art in the effort to support his thesis that schizophrenia is the psychosis of "world ruin." The author maintains that chronic schizophrenics are not apathetic, although they appear to be, and that the "feeling of ruin" is the central phenomenon of schizophrenia. Fourteen schizophrenic drawings and paintings are reproduced, whose nature can be indicated by a few illustrative titles: "Judgment Day," "The ruined church" (an air raid), "Beethoven in the catastrophe" (symbolizing war and culture), "Destruction of Sodom," "Apocalypse," a broken cross, and several execution scenes.

With the appearance of Prinzhorn's *"Bildnerei der Geisteskranken"* (161)* in 1922, the study of the spontaneous drawings of the insane attained much larger proportions. In contrast to most of the earlier workers, whose approach had been chiefly psychiatric, or diagnostic, Prinzhorn was interested primarily in the contribution which insane art might offer to the psychology of creativeness. He identifies himself with the Gestalt view-

* Cf. also (159, 160).

point and sets out with certain theoretical conceptions which color his treatment of the material throughout. Taking a fundamental, universal "urge for expression" as the starting point of all art, he outlines a schema to show how this urge is manifested and develops through a set of complexly inter-related drives or "form tendencies." Among such drives, he discusses the play urge, or activity drive, illustrated by seeing pictures in clouds and by aimless scribbling; the decorative drive, or the drive to beautify and enrich one's surroundings; the order tendency, manifested in regularity, symmetry, and proportion, and derived, according to Prinzhorn, from the orderly tendencies in natural phenomena which serve as guiding principles in this respect; the imitation drive, found especially in realistic art; and the need for symbolism and meaningfulness.

Prinzhorn applies these principles directly to an analysis of the Heidelberg collection of insane art. His book contains 170 reproductions of specimens from this collection, of which 146 are drawings or paintings, 16 being reproduced in color. In each case, dimensions and medium of the original are specified. This book is thus one of the best sources of original material on insane art, quite apart from Prinzhorn's own treatment of the data. The total number of cases included is apparently quite large, although the exact number is not stated. In describing his group, Prinzhorn reports that approximately 75 per cent were schizophrenics, 7-8 per cent manic depressives, 5-6 per cent psychopaths, 4 per cent paralytics, 4-5 per cent imbeciles, and 3-4 per cent epileptics. He adds that schizophrenic art is superior in technique and more varied than that of other clinical groups and that the latter were included mainly for comparative purposes. Of the cases studied, 16 per cent were women.

In the effort to illustrate the operation of the theoretical principles outlined above, Prinzhorn classifies the drawings into five categories, as follows: (1) disorganized, objectless sketches, as in scribbling and stereotyped repetition of crude lines and curves; (2) playful sketches, with manifestation of the orderly tendency, including most of the decorative and geometric designs; (3) playful pictures with imitative tendencies, in which objects or parts of objects are arranged incoherently and placed helter skelter on the page, with no systematic theme; (4) visual fantasies, including portrayals of hallucinations, mythical subjects, "cosmic" themes, and other grotesque or fantastic but well-coordinated pictures; (5) symbolical pictures, illustrated by representations of religious and allegorical themes and often accompanied by cryptic inscriptions. Prinzhorn supplements this survey with detailed case studies of 10 male schizophrenics. The clinical syndromes in these cases are fairly uniform, all being paranoid, with systema-

tized delusions and hallucinations. Hypochondriac symptoms were also common, and one showed in addition a typical manic depressive psychosis. Four had had previous art work in related fields, such as carpentry, architectural drawing, and trade school designing, the remainder having had no artistic training of any sort. In general, the same types of drawings discussed in the group survey were found in these case studies. In addition, the specific influence of past experience was frequently noted. Progressive change in style during the course of the psychosis was specifically observed in the case of one patient who had previous training in design and whose drawings, realistic at the outset, became increasingly grotesque.

On the basis of his material from the group survey as well as the case studies, Prinzhorn undertakes a characterization of the general nature of schizophrenic art. He dismisses such common characteristics as *lack of symmetry* and *distortions of perspective*, regarding them as the probable result of inadequate training. The insane share such characteristics with normal, artistically untrained adults. *Content* he considers more significant, although he does point out that well integrated, complex representations of hallucinations and delusions cannot readily be distinguished from normal bizarre art as illustrated in primitive art, medieval art, the work of Breughel, Bosch, and Kubin, and some modern art. He finds that the themes most commonly depicted by schizophrenics are the erotic and the religious. *Perseverative repetitions* are found among patients with fixed ideas. The drawings often showed a *lack of critical sense*, being executed impulsively and without regard to coherence, unity, or reality. Frequently the drawing seemed to occur purely by *free association*. Prinzhorn also notes the tendency for certain patients to decorate the *entire available surface*, lending a tapestry-like effect to their work. The *tempo* of the drawing is also regarded as a further distinguishing feature, the patient often drawing with a frenzied speed. Finally, the most essential characteristic of schizophrenic art, according to Prinzhorn, is its *autistic nature*. The schizophrenic, like the child, frequently fails to differentiate between reality and fancy in his representations, and unlike the normal artist, is not interested in conveying a message to others.

Prinzhorn's contribution in stimulating interest, suggesting new problems, and surveying and reproducing a large number of specimens, is apparent. His work can, however, be criticized chiefly on two counts. First, his *selection of cases* is made primarily for purposes of illustration, and the data he cites cannot therefore be taken as proof of any of his points. Secondly, his *interpretations* are based upon a number of hypostatized and vaguely defined concepts, such as "universal tendencies" and "innate urges."

Further progress in this field demands operationally defined concepts and explanations which are more objective and intelligible, and more closely in accord with the principle of parsimony.

Weygandt (217, 218) warns against too much subjective interpretation and criticizes Prinzhorn and others for their "hero-ization" of their cases. Objectively, he finds four types of relationship between insanity and art, which he illustrates with specific cases. According to this analysis, insanity may (1) extinguish artistic talent; (2) run parallel with it, and leave it relatively unaffected; (3) facilitate a dormant talent; and (4) cause a change in style.

The study of insane art conducted by Karpov (91), like that of Prinzhorn, was motivated by an interest in the nature of creative activity. The procedure and subjects are not systematically described, but through relatively casual references it appears that the patients were furnished with paper, brushes, and 12 colors, and that their behavior was observed in addition to the finished product. Karpov refers to "several thousand" specimens collected by him from a wide variety of institutionalized patients over a period of 15 years. Selected cases are reported for illustrative purposes. Among schizophrenics, he finds: (1) crude, poorly executed, and barely recognizable sketches; (2) incoherent reproduction of objects without a connecting idea; (3) stereotypy, which he considers to be exclusively characteristic of schizophrenia; (4) symbolism, as illustrated by a patient who used different colors to represent each emotion; and (5) disruption of the associative mechanism. Progressive paralysis he considers unsuited to the creation of artistic work, although several paralytics first began to draw after the onset of their psychosis and their products increased in complexity as they reached the exalted stage. After the onset of psychosis, paranoiacs frequently displayed abilities which had not been previously manifested. Epilepsy likewise seemed favorable to artistic production, cases being described of untrained individuals who produced paintings of considerable artistic merit. In one such case, the artistic talent apparently disappeared after cure, the subject returning to a commonplace manner of drawing.

It is in the manic depressives, however, that Karpov finds the mechanism of creative activity in its fullest development. In the flight of ideas of the manics, he sees a resemblance to the recombination of ideas characterizing the imaginative activity of genius. Several cases of manic depressives who produced original paintings of considerable artistic merit are cited in support of this point. Karpov also believes that drawings furnish an accurate diagnostic index, not only of the type of psychosis, but also of the stage,

such as manic or depressive phases, and the degree of deterioration or recovery. Patients in the depressed phases, for example, tended to use darker colors and to be less productive in general.

In a book entitled "*L'Art et la Folie*" (213) and in an article by the same name (214), Vinchon presents a general discussion of the problem of insane art. No systematic data are given, but collections of insane art and specific cases observed by him are cited rather informally, together with published materials from other writers. Vinchon, too, is interested in the relation between artistic genius and insanity, although he reaches a less optimistic conclusion than Karpov regarding the creative ability of the insane. He maintains that two conditions are necessary for artistic production among the insane: (1) the preservation of a certain degree of imagination, and (2) the possibility of semi-voluntary activity, approaching reflex automatism.

Vinchon then discusses the attributes of artistic products by the insane, illustrating his discussion with specimens from the collections of French and English psychiatrists. Paranoiacs paint in symbolism; make highly decorated diagrams of inventions or insoluble problems, in which stereotyped motifs recur; and sometimes represent their own hallucinations, visual illusions being frequently portrayed, as in pictures of Satan, the Virgin, or Joan of Arc seen in shadows or in cigarette smoke. Manic depressives draw willingly, frequently on the walls; the subject matter is often megalomaniac, as in representations of themselves in regal robes, or it may be erotic and obscene. In most cases, there is an incoherent assemblage of objects, without decorativeness, indicating flight of ideas. The depressed rarely draw, although they occasionally write. In extreme cases, motor and sensory disorders make artistic production in the toxico-manics (drug addicts, alcoholics, etc.) impossible; in milder states, they draw their hallucinations—imaginative and fantastic pictures, with spatial and temporal disorientation and a wild melange of shapes and colors. The general paralytics show disordered drawings with tremors and frequent errors, similar to those of manics. Epileptics depict scenes of violence and mystic symbols, suggesting two traits which Vinchon attributes to such patients, viz., brutality and religiosity. The products of the feebleminded are described as resembling those of the demented, but with a more infantile note.

In the artistic products of schizophrenics, Vinchon sees certain resemblances to trance drawings, especially in the abundance of details, decorativeness, and obscure symbolism. The most elemental form of schizophrenic art is represented by scribblings, often revealing a decorative quality which

results from the stereotyped repetition of forms. Stylized figures, and the introduction of letters, words, numbers, or neologisms are also noted. Erotic drawings as well as designs of cosmic systems are common. Vinchon describes schizophrenic art as indicating the limits to which automatic production can go; the drawings are stereotyped and monotonous, but nevertheless embody a decorative sense and a sense of symbolic representation.

A similar approach is to be found in the work of Marie (119), who states that "the study of the manifestations of insanity in letters and art clarifies normal art as well as normal general psychology, of which disease is only the psychological dissection" (119, p. 394). Discussing an exhibition of approximately 200 items, many of which had been obtained by him at the *Asile de Villejuif*, he concludes that the insane artist usually turns towards primitive forms of art. This is illustrated by alterations of perspective, drawing both eyes in a profile view, a multiplication of feet to indicate running, and similar devices. The artistically untrained insane frequently drew fragmentary pictures similar to those of children.

In a recent discussion of insane art, Guttman and Maclay (70) describe certain general characteristics, and report 5 illustrative cases from their own observations. The patients included 2 men and 3 women, between the ages of 20 and 29. All were schizophrenic, some also presenting paranoid symptoms. Three of the patients had previously had extensive art training. The authors conclude that playful, repetitive drawings, executed more or less automatically, are not symptomatic of abnormality. Fragments of objects or persons, on the other hand, are characteristic of schizophrenia; and even more indicative are mixtures of writing and drawing, especially the combination of figures, letters, and odd lines. The addition of inscriptions to explain the meaning, meticulous elaboration, indulgence in detail, and the arrangement of parts in a manner incomprehensible to the normal person, are also mentioned as symptomatic features. Very few schizophrenics, according to Guttman and Maclay, attempt to give a realistic portrayal of concrete objects, but symbolism and mystical allusions are common. Religious topics and sex motifs also play a large part. The authors report that many schizophrenics can draw an hallucination vividly years after they have experienced it; this was illustrated in one of the cases which they describe. In agreement with the findings of several other investigators who have observed artistically trained insane patients, they describe one case of a young woman who had formerly painted in an ordinary and realistic style, but began to produce very bizarre pictures after the onset of her psychosis.

Schube and Cowell (185) have recently analyzed the spontaneous pro-

ductions of 168 unselected patients (122 women and 46 men) sent from the wards to the creative therapy department. Each patient was ushered into the studio and permitted to do as he pleased. When, after satisfying his curiosity, he wished to draw, he was shown the various available mediums and permitted to choose his own from the following: oils, water colors, clay, pastels, charcoal, and pencil. The choice of subject matter was also left to the patient; no instruction was given, even when requested by the patient. It should be noted, however, that from 10 to 15 patients were present at a given time, and they may therefore have influenced each other's work to some extent. The authors report, furthermore, that if after the drawing had been completed, the patient wished a criticism of it, "he was helped to remove the obstacles that hindered him in carrying out his own ideas in his own way" (185, *p.* 714). It is difficult under such conditions to be sure that the patients' products were entirely spontaneous and free from outside influences.

In their analysis of the products, Schube and Cowell begin with the thesis that "art expression in a normal person tends to show a balance between activity and restraint in the mental state" (185, *p.* 711), and that in the drawings by abnormal persons there is evidence of a dominance of either "activity" or "restraint." Each drawing was given a rating from 0 to 100 in each of the following categories: productivity, design, imagery, and technic. In each case, ratings at the 0 end indicated a predominance of "restraint," those at the 100 end a predominance of "activity." A total R-A index was obtained by averaging the four individual ratings. Taking as indicative of "restraint" an R-A index below 40 and as indicative of "activity" one above 60, the authors found "restraint" to be most characteristic of the work of psychoneurotics, manic depressives in the depressed phase, and patients with psychoses due to drug addiction. The "activity" type of product was characteristic of dementia praecox, paranoid conditions, psychopathic personality, alcoholic psychoses, and manic depressive psychosis in the manic phase. Three specimens are reproduced, one illustrating the restraint and two the activity type of product.

In order further to establish their thesis, Schube and Cowell present graphs on 8 selected cases, showing changes in R-A index during successive weeks. Without reporting any data beyond these 8 illustrative cases, the authors state that a close correspondence was found between the changes in R-A index and the clinical course of the disease. Thus in the psychoses with high "activity" ratings at the outset, improvement would be accompanied by a drop in R-A index, and deterioration by a rise. The reverse relation would hold in the case of psychoses with an initially low R-A

index. Contrary to many previous investigators, the authors report that "purely symbolic art productions have been exceedingly rare in our experience" (185, p. 717). This is particularly interesting in the light of the relatively unselected nature of the present sampling of cases. It would seem that the prevalence of symbolism in insane art may have been exaggerated in many earlier studies by the discussion of selected cases.

In one of the earliest attempts to give a *psychoanalytic interpretation* of insane drawings, Burr (37, 38) discusses a series of drawings by 4 patients, 2 men and 2 women, diagnosed as dementia praecox and manic depressive. Most of the drawings illustrated were by one of the patients, a schizophrenic woman with previous artistic training; many of these drawings consisted of dozens of heads in fancy headgear, scattered over the page. Burr asserts that it is highly probable that all insane drawings are symbolic, generally representing emotional complexes and usually of an erotic nature. Among the artistically trained patients, this symbolism could, according to Burr, be quite subtle.

Kempf (92), in his "Psychopathology," also gives a distinctly psychoanalytic treatment of drawing. No original data are given except six drawings by one patient,* although presumably many other drawings had been examined by Kempf at Saint Elizabeths Hospital. Kempf's treatment of drawing behavior can be summarized by his statement that the trends of the "unconscious mind" are represented in the paintings of the great masters, and that the insane, because of their released inhibitions, are apt to express such trends even more plainly in their productions. A universal, fixed "language of symbols" is assumed in the interpretations of such drawings, and the "latent content" is considered to be erotic in all of the cases which are discussed.

Lewis (110) has examined a number of drawings by psychotics and neurotics, from the psychoanalytic point of view. He regards drawings as closely akin to dreams in revealing "unconscious mechanisms." As in the case of dreams, he differentiates between the "manifest" and the "latent" content of the art product and suggests the use of free association to arrive at the latter. He also asserts that such drawings furnish material for studies on the "collective or archaic unconscious." Typical drawings are analyzed and their "latent content" described in terms of the "death wish," autoerotic, masochistic, and sadistic tendencies, and similar psychoanalytic concepts.

The psychoanalytic approach is also illustrated by the work of Kris (97),

* Three other illustrations of drawing and embroidery are reproduced from other published sources (pp. 160, 694, 695).

who maintains that the artistic products of the insane constitute attempts to readjust to reality. He points out that in some instances art is produced only during the psychosis, while conversely there are cases of professional artists who stopped producing while deranged. He suggests that insane art is often unintelligible because the "ego-function" is disturbed, while in normal art the "ego" retains its dominance over the "id." Kris illustrates his discussion with insane drawings taken mainly from other writers. Wulff (224) proposes a revision of Kris' theory, suggesting that the poverty of schizophrenic pictures is the result of unsuccessful attempts to restore the personality. Thus such products would represent a compromise between the striving to adjust to reality and the alienation.

In a treatise on symbolism in art, Osario (reported by Marie, 120) discusses his own observations on the art products by patients at the asylum of Iucquiry in Brazil. In his interpretations of these works, Osario applies the Freudian concepts of (a) symbolism as a function which may be exercised automatically and which may escape conscious control, and (b) transference of affective elements from an object to its symbol, as illustrated in fetishism. Erotic symbolism abounds in the illustrations of insane art which he discusses.

A series of 37 drawings made by over 12 patients during the course of psychoanalytic treatment are reproduced and discussed by Heyer (77), together with selected material from the case histories. Heyer refers to these products as "pictures drawn by the subject's unconscious" (p. 251). They represent drawings of dreams or visions by the patient or sketches made in a semi-trance, while attention was diverted. The drawings, which are not a random sampling but were specially selected by the author to illustrate his points, are interpreted in terms of psychoanalytic symbolism and linked to the patients' emotional disorders.

2. *Individual Case Studies*

Even before the recognition of abnormal art as a special problem for investigation, psychiatrists had from time to time become interested in individual patients who were especially prolific or talented in their artistic productions. One obvious limitation of such case studies is the distinctly selected nature of their material. As a rule, only those patients who produced in very large quantities or, more often, those whose work attracted notice because of its artistic merit or curiosity would be considered worthy of study and described in the literature. On the other hand, such studies make possible a more intensive analysis of the factors operative in each case, and permit an investigation of various subsidiary problems, such as

the comparison of artistic production before and after the onset of psychosis and at various stages throughout its course.

The fullness of the report, to be sure, varies widely in different studies. Nearly all investigators report the sex of the patient, the approximate extent of previous artistic training, and some sort of diagnosis. The latter, however, is often difficult to interpret because of changing standards of classification and loose use of terms. It might be noted that the large majority are classified as schizophrenics, although a relatively large number also show paranoid symptoms. Occupation is frequently given and, less frequently, education. Age is given in some cases, but this is not a very significant item owing to the relatively narrow age range of most of the cases as well as the fact that many patients drew over a period of several years. The large majority of studies reported in the present section deal with only one case; a few include two cases, and only two studies cover a larger number. The total number of cases thus surveyed is 63, to which should be added the 10 cases of Prinzhorn and the 5 of Guttman and Maclay reported in the preceding section.* The nationalities of the patients include American, Austrian, Czechoslovakian, English, French, German, Hungarian, Polish, Swiss, Russian, and one Malayan hospitalized in France.

Drawings of *hallucinations* and *delusions* were among the first to attract notice, probably because of their obvious diagnostic significance. In an English book published in 1810, Haslam (72) describes the case of a man admitted to Bethlem Hospital in 1797. This patient developed delusions of persecution, insisting that "in some apartment near London Wall, there is a gang of villains profoundly skilled in Pneumatic Chemistry, who assail him by means of an Air Loom" (72, pp. 19-20). Haslam reports the patient's detailed description of each of the seven members of this gang as well as a long list of tortures which they caused him to suffer by means of this machine, such as "sudden death-squeezing" and "lengthening of the brain." A drawing of this machine is reproduced, together with a floor plan showing the relative positions of persons and objects in the assassins' rendezvous.

Näcke (137) discusses and reproduces a life-size mural painted by one of three sisters with "*folie à deux*," together with a verbal interpretation of the mural written by another sister.** The mural was a portrayal of their delusions and represented "the chorus of vengeance," the furies of hell persecuting the patients, and similar delusional ideas; it consisted

* These studies were reported in the section on group surveys because in their methodology and treatment of results they resembled such studies much more closely.

** The third sister had died shortly after commitment.

mainly of female faces with flowing hair and crossed broomsticks at the bottom. The hair was modeled in clay or soot. The case of a young school boy from the *École des Beaux Arts*, a hebephrenic dementia praecox who also drew his hallucinations, is described by Sicard (189). Two of his drawings, which are reproduced, represent "Terror" and "Cadaverization," respectively. Sicard is impressed with the artistic merit of these products, even in comparison with the work of other artistically trained persons. Pasturel (146) describes a paranoid schizophrenic who made elaborate and fantastic medical diagrams. He had been a farm laborer with only a very rudimentary education, but after admission to the hospital he spent some time working for one of the physicians, and in this medical atmosphere he developed his medical delusions. Henceforth he was constantly absorbed with medical conceptions and the etiology and therapy of diseases, based upon special anatomical facts of his own invention.

Schilder and Weidner (182) discuss the drawings made by a female schizophrenic to depict her hallucinations. The patient believed that she had worms in her body, as well as threads, some of which were glowing threads. In a case report on one of his patients, Schilder (181a) describes a vision which the patient represented in a drawing and which is interpreted as the patient's sexual conception of the genesis of the world. Sommer (193) reports the case of an artistically trained paranoiac who drew his visions. All of his drawings were of a characteristic style, showing stereotypy of forms in general, and especially of bodily form, and a pronounced sexual character. The case of a professional artist who illustrated his alcoholic delusions is reported by Sagel (178). These illustrations, consisting chiefly of pencil or charcoal sketches of busts or heads expressing various emotions, are considered somewhat atypical by Sagel.

Another patient who drew hallucinations, described by Serko (188), produced a number of bizarre but technically well executed landscapes with fantastic creatures. Likewise, Barbé (29) reports the case of a shell-shock patient who, during a period of catatonic agitation, drew a series of death heads, skeletons, bones, daggers, and dismembered bodies on soiled yellow envelopes. It was impossible to get any further drawing from this patient, or any coherent explanation of these drawings. Garnier (65) describes the case of a psychopath with strong erotic preoccupation who wrote detailed descriptions of sexual unions and drew nudes with exaggerated sexual organs. The patient derived pleasure from carrying these drawings with him. A somewhat similar case is reported by Hauke (74). A 41-year-old artist was arrested after 10 years of activity for scattering obscene drawings, with accompanying verses, on the street. He obtained sexual satisfaction

from the idea that these would be picked up by women. He also sent similar productions to girls who advertised in the newspapers for positions or who had won contests, but he made no effort to get in contact with the recipients. The drawings were reproduced with tracing paper and the verses were mimeographed. Their sole theme was female auto-eroticism. The patient had been overstimulated but not satisfied in his marital relations and had resorted to auto-eroticism.

The use of spontaneous drawings as a means of studying disorders in the *associative mechanism* is illustrated by two case studies of schizophrenics reported by Hassman and Zingerle (73). The first was the case of a former Navy officer who died after 26 years of institutionalization, leaving behind him two large crates of drawings. The patient was quite talented and had had training in drawing. The drawings gave the impression of a dream-like, incoherent flight of ideas and presented a jumble of details. Writing was frequently combined with drawing, sometimes to such an extent that the pictures looked like illustrations of the text. The authors examined each drawing in the effort to discover the sequence of associations which it presented. Four types of grouping were found, within individual sheets: words following pictures; pictures following words; pictures following other pictures; and in a few cases, words paired off with other words, or a series of associated words. All showed the predominance of superficial associations, such as sound associations in words and contour or shape associations in objects. Thus a drawing of an insect might be followed by that of two folded hands resembling the insect in outline. Diverse drawings on a single sheet were sometimes connected by lightning, dragons, or comets. Sex themes as well as naval scenes recurred perseveratively and frequently interrupted a sequence of associated items. The second case described by Hassman and Zingerle was that of a 38-year-old pastry baker, who had been in the institution for 15 years. In an analysis of his spontaneous drawings, the authors again found perseveration and evidence of a "sex complex."

A number of case studies report the *appearance of artistic talent after the onset of psychosis* in persons who had had no previous artistic talent or inclination. In the majority of such cases, the art products are relatively abstract, stylized, or symbolical. Maschmeyer (125) describes 2 patients in whom the onset of schizophrenia seemed to release artistic talent. One produced pictures which appeared to be normal, except for the inclusion of many symbols possessing a wealth of meaning for the patient. The second patient underwent a period of slow artistic development over a period of several years and never lost his talent during his 20 years of insanity. This

patient became quite gifted and his work attracted the serious notice of art critics.

Pinel (155) cites the case of a sculptor who became insane when denied admission to the academy. After being institutionalized, he began to paint, although he had done but little of this prior to his illness. He was encouraged in this pursuit, but when he demanded a model or sketch for his work, this was not furnished, whereupon he quickly destroyed all his art tools and did no further painting. Naudasher (139) reports the case of a Parisian milliner who developed a zealous interest in drawing after the onset of paranoia with delusions of grandeur and persecution. Arrangements were made for her to receive some art instruction in the hospital, after which she became technically very skilled. She produced many copies of paintings which could not be easily distinguished from the originals, although her earlier drawings had not given much promise of her subsequent achievement.

Two interesting cases in which a geometrical, abstract style of art developed during a psychosis are described by Marie and Pailhas (122, 123). One was a paranoiac with delusions of persecution, who before commitment had been a butcher and then a hospital attendant. This patient manifested what the authors term a "geometromania." He produced extensive series of symbolic and fantastic geometric designs, some of which represented astrological or cosmic schemes, while others were made to illustrate the patient's psychological and social "theories." The drawings were very complex and well executed, without ruler or compass, and some of the colors employed were made up by the patient himself. The other case was also a paranoiac with ideas of grandeur, who believed himself to be the creator of a new art which he termed "conism." He drew landscapes in which all forms were reduced to curves, cylinders, and cones. He spoke of his art as "anticubism," in which the cone replaced the cube.

Two further cases of paranoia are described by Marie (118). One of these patients exhibited an "arithmetic mania" during the earlier stages of his delusion, covering many pads with his computations. Subsequently, he too developed a geometric mania in which he drew series of stereotyped geometrical figures in three colors. Many of these designs were complicated stars; a stylized aeroplane also recurred frequently as a decorative motif. The second case was that of a distinguished mathematician who, although not institutionalized at the time, had developed definite delusions of persecution. Marie described about 100 drawings produced by this subject in a semi-somnolent state, whenever he awoke during the night. On the following morning, the subject would always experience surprise

upon seeing his drawings, which included erotic figures and swarming, satanic scenes reminiscent of medieval fantastic art.

Huot (82) studied a Malayan paranoiac with delusions of grandeur and persecution, who was hospitalized in France. The patient was intelligent and fairly well educated, having been employed as a teacher in an English mission school. As his emotional disorder developed, he began to paint vigorously, expressing visually his autistic thoughts and ramblings. His pictures were bizarre and contained many incongruities and irrelevant objects. After institutionalization, he produced imaginative and symbolic paintings, drawing upon the recalled images of his former life for his subject matter, but never upon his immediate surroundings. Most of his pictures were left unfinished.

Rosanoff (173, p. 684), in the 1938 revision of his "Manual of Psychiatry and Mental Hygiene," describes a paranoid schizophrenic who was institutionalized at the age of 48. At that time, evidences of deterioration were already present, being manifested particularly by indifference, indolence, and incoherence. This patient produced many drawings of a very uniform style. The pictures were all of the same size and were drawn in colored crayons upon old pieces of bed sheets. Most of the drawings showed a rather stylized human figure, with characteristic garb and head-dress. These pictures were highly symbolical and many of them seemed to show sexual trends.

In certain cases, a close resemblance has been explicitly noted between the drawings of insane patients and *cubism*. Thus Künzel (98) describes an artistically trained schizophrenic who suffered from hallucinations since puberty, but achieved quite a reputation as a cubist painter. The subject was so manifestly abnormal that he was at first rejected from the army draft on the grounds of mental disorder and was only later admitted and allowed to work as an attendant in an army hospital. Morgenthaler (135) reports in detail the case of a schizophrenic, institutionalized since the age of 25, who drew and wrote extensively. His drawings are described as having many traits in common with cubism. Morgenthaler also points out that these drawings differed from those of most schizophrenics in that they were generally completed, and achieved a certain harmony. They were usually ideoplastic and were likened to primitive art in this respect. These drawings also showed some of the typical schizophrenic characteristics, such as perseverations, automatisms, mannerisms, and "*horror vacui*," or the tendency to cover the entire surface.

The drawings made by the former Russian ballet dancer, Nijinsky, while confined in a Swiss sanitarium as a schizophrenic with paranoid delusions,

have attracted the attention of many psychiatrists. A series of over 50 of these drawings, illustrating the progressive stages of his psychosis, were exhibited in New York City in 1932, and a similar collection was exhibited in London in 1938. A few of these drawings have been reproduced in the biography of Nijinsky (140) written by his wife, as well as in Nijinsky's diary (141), edited by his wife. From time to time, a number of these drawings have also appeared in newspaper articles about the dancer (cf., e.g., 25, 199). The drawings, which were begun after the onset of the psychosis, include water colors, pastels, crayons, and pencil sketches of bizarre faces and persons. A striking characteristic common to all of them is the use of interlocking circles and ovals in building up the highly stylized portrayals. The resemblance of these products to modern art, and in certain cases to African masks, has been frequently pointed out. Attention has also been called to the possible influence of dance figures and movements upon the construction of the drawings.

A few case studies describe a *change* or *evolution of style* through successive stages in the development of the psychosis or in the recovery period. Noyes (143) studied a paranoic with religious delusions who had had extensive art training and had formerly been employed in various capacities as lithographer, comic strip artist, and book and magazine illustrator. After the onset of his psychosis, he began to draw and carve each day, his products being excellent in technique but bizarre and replete with symbolism. Many were stylized drawings illustrating his system of theology, in which mythology mingled with the Bible; others were allegorical sketches bearing fantastic titles. Three of his earlier works, reproduced for contrast, are quiet, restrained, conventional landscapes.

Schottky (184) observed the changes in artistic style in the case of a female schizophrenic commercial artist. He reproduces 2 pictures made before the psychosis, 2 at the onset, 2 during the psychosis, and 1 during recovery. He points out that the content of the pictures remained normal, only the style giving any evidence of the mental disturbance. During the psychosis, the style is described as "nonrealistic and disintegrated, showing tension"; during recovery, it was "a style of weakness and distraction." Mendelssohn (126) maintains that the personality changes occasioned by psychoanalytic treatment are reflected in the patient's handwriting, his "psychograms" or automatic sketches, and in the drawings of his dreams. To illustrate this point, he reproduces 5 psychograms by a 48-year-old philosophy professor suffering from a compulsion neurosis. The pictures are interpreted by the author as showing progressive recovery during psychoanalysis.

Pfeifer (149) and Weygandt (217, 218) describe the case of another schizophrenic woman with delusions of persecution, who had previously been a commercial artist and successful illustrator of children's fairy tales. Before the onset of her psychosis, her paintings were colorful, ornate, and pleasing; but they became more confused and the essential details were relegated more and more to the background as her psychosis developed. After commitment, she produced only a few very ugly and inferior drawings. Two years later, she was beginning to draw more extensively in a primitive, weird, expressionistic style. At times she would indulge in orgies of color, as in a weird portrait and a fantastic picture of an elephant. She also began to embroider, and at a still later stage was engaged in making cloth dolls in a modern, sophisticated style.

Progressive changes in style are also discussed in an article by Janota (89), which includes case studies of 6 patients: 5 schizophrenics and 1 epileptic. Three of the schizophrenic patients were professional artists. One of these showed a gradual improvement in skill and technique after the onset of his psychosis, but his work showed little or no imagination. The other 2 artists showed a deterioration of style with the onset and progress of their disease. One of these drew fantastic castles and aristocratic themes related to his grandiose delusions. Later, this case showed a transition to writing, embellishing his pictures with a sort of shading achieved with very small words. The other showed a gradual deterioration in his artistic creations, which before the psychosis had been characterized by excellence of composition and originality. Although his technique remained relatively unimpaired, his later works were schematic outline drawings revealing little attention to detail and a dearth of ideas. The 2 remaining schizophrenic patients were artistically untrained persons who first began to draw after commitment. One was a shoemaker, diagnosed as a paranoid schizophrenic with considerable sexual difficulty, who began to draw relatively abstract pictures full of sexual symbolism. The other, a female patient, illustrated her "diary" with very realistic figures. Her portraiture is described as excellent, and especially skillful in catching the various moods of her characters. The last case is that of a 36-year-old epileptic who produced over 100 stereotyped drawings of 2 scenes, one a hospital ward and the other a garden scene with a castle in the background. Both pictures were very realistic and were repeated in identical manner, although the patient had no access to his previous drawings. Even the minutest details, such as the wall paper design in the hospital scene, were drawn with remarkable uniformity in successive reproductions.

Marie and Meunier (121) discuss the case of a schizophrenic patient who

displayed a curious succession of phenomena in his graphic behavior. He was very prolific, covering many pads with his writings and drawings. The following stages were observed in succession: (1) a curious mixture of stereotyped numbers and words, with "echographia" or the repetition of a heard word or phrase; (2) the words underwent certain changes, some letters being repeated within a word, and certain numbers and letters, such as s, 3, and p, b, being used interchangeably—at this time there was also a stereotyped repetition of certain associated terms, suggesting a preoccupation with foods and cookery; (3) lines were introduced on each page, always of the same kind, and sometimes decorated with either capitals or small letters; (4) the capitals became small ducks and birds, very stylized and suggestive of Egyptian hieroglyphics; (5) appearance of drawings, either copied from nature or imaginary, the latter being stereotyped around 4 or 5 main types; (6) a single stereotyped drawing repeated over 100 times, the original being a carefully drawn scene with two young peasants courting, apparently suggested by a colored lithograph. The successive repetitions of this drawing became more schematic and stylized until the scene was no longer recognizable. On the basis of observations and conversations with the patient, the authors concluded that these drawings were made in the effort to fight off amnesia. They recognize two phases in this struggle: in the first phase, the patient tried to preserve his memory directly by what he wrote or drew; in the second, he resorted to the use of graphic signs as cues for temporal and spatial orientation. The patient associated each figure with the time and place at which it was drawn, a certain line representing Sunday, another kitchen, and so forth. Sommer (194) reports the case of a 30-year-old laborer with "primary dementia" whose drawings, as well as writings, gave clear-cut proof of his progressive psychotic deterioration.

In a paper presented in 1884 before the *Société Médico-Psychologique*, Régis (165) exhibited and discussed a series of drawings produced by manic depressives, pointing out that such drawings throw a great deal of light upon the development of this psychosis and the change from one phase to another. He also expressed the opinion that variations in drawing behavior are equally valuable and indicative in other forms of insanity. A comparison of typical drawings taken from the productions of an 11-year-old child while in a Jacksonian seizure and while in a normal state is made by Eliasberg (52). The author finds the drawings executed during the abnormal state more artistic, attributing this greater artistic tendency to the removal of normal inhibition.

An interesting case of a patient whose drawings appeared to be quite *normal*, although his verbal behavior gave evidence of considerable deterioration, is described by Trepsat (205). This patient was a 50-year-old paranoid schizophrenic with hallucinations and delusions of persecution, who subsequently died of a cerebral hemorrhage. His speech was incoherent and full of neologisms, and even when using common words he gave them new meanings. His drawings, however, seemed to be perfectly normal and showed very good observation of his surroundings. In addition to landscapes, animals, and other common subjects, he drew very good realistic caricatures of the other patients.

In contrast to many of the studies which have been reported above, some writers maintain that *artistic activity of any merit is rare or impossible during psychosis*. To be sure, the number of case studies which fall into this category is relatively small, but this may easily be owing to the selective factor mentioned earlier in this section. Those patients whose products are meager or crude would not be very likely to be discussed at any length in an individual case study. Pfeifer (149) maintains that spontaneous artistic activity is as rare among the insane as among the normal and that it is confined to schizophrenics. He also asserts that those patients who draw are influenced by the style of their times. After describing 4 illustrative cases of patients who drew extensively, he concludes that pathological drawings are always trivial and nonsensical and that any "deeper wisdom" they may show is read into them by the sane observers. Pfeifer also maintains that any artistic value in such work is attributable to remnants of sanity and to former talent temporarily breaking through the psychosis. Thus two of the cases which he describes had formerly been artists.

Becker (32) likewise describes the spontaneous drawings by 2 of his patients as being playfully executed, poorly integrated, and showing no real coherence. Occasionally the presence of primitive principles of organization would lend to such products a fortuitous decorative character. Even in such cases, however, the production could not be called art in the sense of willful artistic creation. Becker considers schizophrenic drawings to be similar to the scribbles of normal people when preoccupied with something else. The same parallel with "doodling" is made by Helweg (76) in a case study of a schizophrenic patient who was not artistically talented. Helweg maintains, however, that among artistically gifted patients, the illness frequently releases a unique imaginative activity. Leroy (109) discusses a schizophrenic patient with delusions of grandeur and flight of ideas who produced many dozens of similar drawings during his three years at the asylum. The drawings were stereotyped and incoherent, con-

sisting of incomprehensible arrangements of lines, figures, and writing. Automatisms, sound associations, and childish ideas were also indicated by the content of these drawings.

Individual case studies on abnormal *children* are relatively few. Merzbach (127) describes the case of a 14-year-old boy with no artistic training who felt impelled to express himself by drawing while in a state of psychosis. Under these conditions, the patient produced a number of highly symbolic self portraits. Rouma (174) discusses the drawings of an emotionally unstable 5-year-old boy who was a pathological liar. The drawings, which consisted mostly of scrawls with crudely indicated human forms, were accompanied by elaborate and fantastic oral interpretations, usually of a gory nature and replete with religious allusions. Rouma discusses a number of factors in this child's environment which might account for his imaginative activity as well as for his excessive lying.

A number of case studies have employed a *psychoanalytic approach* to the drawing behavior of the patient. Pfister (150, 151, 152, 154) has repeatedly described the case of an intelligent, well-educated 18-year-old neurotic boy who developed pronounced introverted tendencies, fell out with his parents, became disgusted with life, and brooded over suicide. A series of 8 drawings and oil paintings made by this patient in the course of psychoanalytic treatment are reproduced, together with the patient's free associations to each. Psychoanalytic interpretations are given, in terms of the patient's "complexes." The drawings are skillful, graceful, and sophisticated in technique, and symbolic and rather fantastic in their content. The titles given to them by the patient furnish an idea of their general trend. They are: Self Portrait, Requiem, Insanity, The Nymph, The Bridge of the Dead, Sunny Height, Soul Whither, and Doubt.

Another case discussed in great detail by Pfister (153) is that of a young Frenchman, "acknowledged in his own circle as a highly gifted artist," who consulted Pfister because of emotional difficulties. Free association was employed in connection with drawings produced in the course of psychoanalytic treatment. Several of these drawings are reproduced, including three portraits of the analyst, a self-portrait, a portrait of the artist's wife, as well as a few more symbolical and abstract subjects, such as drowned man, bird, death and eternity. Psychoanalytic interpretations of the meaning and function of these drawings are given. It might be added in this connection that there appears to be an internal inconsistency running through Pfister's interpretations. At the same time that he emphasizes the importance of the subject's life history and experiential back-

ground, he introduces "instincts," "life-will," "life-force," and similar hereditarian and quasi-mystical concepts.

Bertschinger (34) gives a psychoanalytic interpretation of about 100 drawings made, in the course of a year's daily psychoanalytic treatment, by a female patient diagnosed as hysteria tending toward dementia praecox. Bertschinger reproduces 29 selected drawings, showing people and weird animals, the features of both often being combined. Basing his observations on the drawings by a 44-year-old patient, Rorschach (172) reports that the patient's own interpretation of the very crude and apparently meaningless lines which he drew is a good example of the "symbolic content" which a schizophrenic can place in relatively unimportant scribbling. In another study, Rorschach (171) discusses a painting of the Last Supper made by a 40-year-old schizophrenic and feeble-minded house painter with great artistic ambitions. The picture is reproduced, together with the patient's own interpretations, which are employed to uncover his various "complexes." In a recent book reporting "a research into the unconscious from schizophrenic dreams and drawings," Baynes (31a) discusses the drawings made by two borderline schizophrenics in the course of psychoanalytic therapy, 55 of their drawings and paintings being reproduced. The rôle played by the drawings themselves in the process of recovery is emphasized by the author.

Mention should also be made of the so-called "*idiots savants*," feeble-minded individuals with a pronounced talent in some one field. Tredgold (202) describes the case of a cretin imbecile with a remarkable gift for painting. The subject's mental deficiency was apparent from an early age, the boy being awkward and incoordinated in his movements and unable to learn to read and write. When his talent for drawing became apparent, he received instruction in this field and subsequently achieved a phenomenal success. He produced drawings and water color sketches of animals and children which were remarkable for their life-like quality and masterly execution, although his greatest success was in his paintings of cats, an achievement which earned him the name of "The Cat's Raphael."

Vaughn and Hoose (206) have recently described the case of a 14-year-old Negro boy with a Stanford-Binet I.Q. of 67, who was highly gifted in drawing and painting. His Goodenough test mental age was 13 and his Meier-Seashore art judgment score reached the 12th grade median. His artistic ability was not merely skill in copying. A public school art instructor who examined the boy reported that of the 750 children under his instruction, only one reached the subject's performance. The authors suggest that exceptionally good visual imagery, possibly of the eidetic type, plus a

fine manipulative ability, may account largely for this subject's talent. The well-known case of Henry Pullen, the "Genius of Earlswood Asylum" (180, 202), who exhibited marked mechanical ingenuity as well as unusual talent in drawing and carving, will be discussed in the following section on plastic art.

Finally, we may include certain investigations which deal, not with drawings or paintings, but with closely related products in the field of graphic art. Esser (56) describes a curious case of a fairly intelligent 27-year-old post-encephalitic man who constructed elaborate *typewritten pictures* which he called "plasmas." Two illustrations of such plasmas, which had been part of a birthday letter, are reproduced. The letter showed poverty of ideas, a tendency toward stereotypy and perseveration, and childishness. The plasmas include landscapes, houses, and other conventional pictorial subjects. They look much like embroidered pictures and are painstakingly constructed by the juxtaposition of letters, dashes, brackets, and other symbols available on the typewriter keyboard. Trofimova (205) reports the case of a schizophrenic girl who became quite gifted in a limited field, viz., cutting out *paper silhouettes* of animals, most of the silhouettes being of the same animals. In his discussion, Trofimova suggests that schizophrenic children with disorders of thought and perception derive the content of their hallucinations from their past experience, and in some cases identify themselves with the animal world, as illustrated by the patient under consideration.

CHAPTER IV

NEEDLEWORK

EVARTS (57) discusses needlework, which is very common among institutionalized female patients. These patients often cover their clothing with embroidery of their own design. One woman observed by Evarts dressed almost entirely in lace of her own manufacture. Another covered bits of muslin almost solidly with her embroidery and then wore them as head coverings, shawls, or aprons. Still another made a complete dress and hat from white muslin covered with brilliant red and blue embroideries of lines and tracings, flowers, and even human figures. Evarts comments that "most often this is very primitive, bearing a strong resemblance to the early productions of the race" (57, p. 365). It might be added that inadequate materials and facilities, as well as insufficient training in some cases, might well account for such a resemblance.

Spitzka (195) reports the case of a manic patient who tore off all her clothing and then, in an incredibly short time, picked the matting of the isolation room to pieces and made from the strands a "most complete and tasteful" outfit, including every article of clothing from undergarments to hat, stockings, and satchel. Such cases are not unfamiliar in the records of most insane hospitals.

Evarts (57) also discusses in some detail the case of one female patient, a former dressmaker, who would unravel stockings and bits of cloth and make lace with the thread. Evarts reproduces a piece of needlepoint lace made from such ravelings. The lace is decorated with several crude human figures, some flat and some in relief, the latter being made of white cloth stuffed with other materials. The patient's associations to each part of the design are reported, and the product is interpreted psychoanalytically as indicating an "incest phantasy." Some of the associations given by the patient are of a religious nature and include references to the Virgin Mary, the Magdalen, Saint Joseph, and Saint Michael. Erotic ideas are also indicated, the sex organs being shown in many of the figures.

Ferenczy (60) describes many of the characteristics of the embroidery of female patients. Among such characteristics he mentions losing stitches and failure to tie the thread which would be necessary to make the work last. Some patients follow the sample blindly and automatically; others embroider parallel with the design rather than over it. Failure to connect

parts of the design, unsystematic plan of work, and local bunching of colors irrespective of pattern, were also noted. About 48 per cent of the patients made their own design. These cases were even more revealing, symbols and even words often being incorporated in the design. Ferenczy maintains that, although there are many points of similarity between the handiwork of insane patients on the one hand and child, primitive, and folk art on the other, the two groups are distinct and no transitions can be found between them.

Embroidery is also discussed by Vinchon (213) in his book on "*L'Art et la Folie*." In addition to conventional motifs, such as flowers, vases, and inscriptions, which take on an increased symbolic significance for the patient, such embroideries also include personages and scenes connected with the patient's delusions. Stereotypy occurs even earlier in the embroidery than in the drawings. The patients generally continue their embroidery for a long time, although in the later stages of the psychosis it becomes merely an incomprehensible jumble.

Vinchon (212, 213) is particularly interested in the making of *dolls*, an occupation which he finds to be common in many forms of insanity. The dolls are usually made clandestinely and are not shown to the psychiatrist unless the latter has established fairly good rapport with his patient. Vinchon regards this activity as indicating more than just a pastime or the pleasure of constructing figures. He sees in it evidence of morbid desires, sexual anomalies, and fetishism. Thus he maintains that the care, dressing, and handling of these dolls satisfies the sexual impulse which is reawakened by insanity, and he mentions in support of this point the frequent embarrassment and blushing of the patient when the doll is unexpectedly "discovered" by the psychiatrist. Some of the dolls which he observed were well dressed, but in outmoded fashions, often in a style current before the onset of the patient's psychosis, in spite of the fact that the patient had daily opportunity to observe contemporary dress styles. Some patients seemed to prefer a special type of doll, such as blondes, or dolls dressed like pages and of uncertain sex.

Kraepelin (95) discusses the *knitting* of socks by some of the female patients under his observation. He finds a number of common peculiarities, such as dropping stitches and knitting socks which are closed at both ends or which have abnormally long legs. He believes that characteristic deviations are shown by different forms of insanity in this activity, and reproduces samples to illustrate this point.

CHAPTER V

PLASTIC ART

IN his "*Bildnerei der Geisteskranken*" (161), Prinzhorn also discusses plastic art, of which there are many specimens in the Heidelberg collection. He reports in detail the case of a paranoid schizophrenic with hallucinations and delusions of grandeur, who had had a certain amount of previous experience with plastic art in his work as builder and decorator and in the making of iron castings. This patient also used to make plastic decorations of sawdust and carve dolls for his children. After commitment, he produced a number of figurines molded from the soft part of bread. He covered these figures with whitewash, giving them the appearance of gypsum casts. He also made a large number of relief carvings and figurines out of wood, which were usually stylized and somewhat fantastic representations of men or animals, the features of both being combined in some cases. Although presenting a number of disproportions and irrelevant or inconsistent items, his work revealed skill in technique and is said to resemble in style certain products of primitive art. Religious and erotic themes were often represented, and several of the figures had distorted or exaggerated sexual organs.

The highly skillful execution of a series of wood carvings by an alcoholic manic patient with no previous training or experience in carving is discussed by Villamil (210). This patient was a Spanish farmer of "limited education." The carvings were made during the phase of greatest disturbance. All had a strongly religious tone and were replete with what the author recognizes as ancient symbols from the Egyptian, Persian, and Catholic religions. As the patient recovered, the artistic and symbolical characteristics of his work diminished, and purely utilitarian products, such as wine goblets and pipes, gained the ascendancy. During the last stages of recovery, when the patient was sent to the occupational therapy carpentry shop, he asked to be allowed to work in the fields instead, since that was his vocation. When confronted with his earlier carvings he doubted their authorship. The author gives a highly psychoanalytical explanation of these carvings, in terms of the "archaic unconscious" where these ancient religious symbols were supposed to have been stored. The possibility that the observer may have read this symbolism into the products must, of course, be considered; while the use of the Catholic symbols might be explained

in terms of the patient's past experience. Mendelssohn (126) reproduces 12 wax figures made by a 45-year-old woman, during the course of psychoanalytic treatment, to represent her dreams. He maintains that these figures reflect the patient's recovery during the treatment. Helweg (76) describes the case of a young schizophrenic wood carver who, before the onset of his psychosis, was technically clever but had no originality. After hospitalization, he developed great freedom of imagination and produced very artistic carvings.

Morselli (136) reports the case of a 33-year-old carpenter and cabinet maker who developed paranoia with delusions of persecution and grandeur, largely of a social and political nature. After institutionalization, he drew and carved incessantly, the majority of his products being fairly stereotyped "trophies" with armor, coat-of-arms, emblematic figures, and strange allegorical inscriptions. Many symbols were employed which had a particular meaning for the patient. Thus a cigar placed in the mouth in a slanting position represented disdain for kings and tyrants. Such objects as inkwells, uniforms, wings, and "the medal of the order of the pig" likewise possessed special symbolic significance. This is illustrated particularly in two special carvings, one a figurine of a soldier and the other a sort of altar, which represented several months of work and in which the patient had reproduced most of his morbid concepts. A curious feature of the soldier statuette was the trophy over the head, which symbolized a poem of the patient's own composition.

Hospital (80) describes a wooden panel, one meter long, carved in bas-relief by a man who gave his occupation as painter and entered the *Asile de Mondredon* as a voluntary admission, suffering from a melancholic and hypochondriac condition. Although containing certain distortions of perspective and proportion, this panel was skillfully executed and resembled the bas-reliefs of medieval abbeys. The work was done with painstaking care and great patience, in spite of inadequate tools. In its conception, the panel is complex, well integrated and carefully organized. It represents the care of the insane by monks, and is divided into a number of sections in which the various phases of this theme are developed.

Stärcke (196) discusses about 40 sketches and models executed by a hebephrenic sculptor during his confinement in an asylum. The products were chiefly representations of men and animals, the latter including reptiles, fish, birds, bison, and horses. Christ heads were also quite common. The author finds sexual symbolism in these products and discusses "hair and beard fetishism" in this connection. Osario and Monteiro (144) studied the drawings and sculptures by a former Portuguese sculptor

suffering from paranoid dementia praecox with erotico-mystic delusions. Through the psychoanalytic technique, they tried to determine the symbolic value of different elements in these products. A large number of the symbols were derived from the Catholic religion, in which the patient was a fervent believer. A series of "character heads" made by the sculptor Franz Xavier Messerschmidt after becoming paranoid are discussed by Kris (96a), who recognizes in them a portrayal of the sculptor himself in many different moods and conditions, experimenting, as it were, with various styles of demeanor in an effort to recover the social adaptation which was disrupted by his insanity. Many of the heads are quite distorted, as in the expression of violent emotions.

The case of a 57-year-old plastic artist with autotopagnosia and finger agnosia is described by Engerth and Urban (54). The authors attempted an analysis of the various phases in the patient's recovery through a study of the numerous plastic products which he made in the course of recovery. A relationship between the verbal and artistic disturbances was noted. Certain parallelisms with child art were also pointed out.

Laignel-Lavastine and Vinchon (100, 101, 215) discuss the case of a 46-year-old sculptress who, following a severe emotional shock, attempted suicide, developed hallucinations, turned to religious mysticism, and took up spiritistic practices. In her newly intensified religious fervor, she vowed to make a bust of the Virgin of the Redemption. She went into a trance which ended in unconsciousness and a few days later she made the statue in a quasi-automatic manner, her arm feeling as if it were controlled and guided by external forces. It might be noted in this connection that the patient had been doing automatic writing in the course of her spiritistic seances. The bust was quite unlike her usual work, being stylized and archaic, and resembling the religious figures of primitive Gothic and Florentine Renaissance art. The patient herself expressed surprise when she subsequently examined the statue, and found it difficult to retouch the work and to complete the details.

In his general discussion of insane art, Réja (166) describes a number of plastic products from the collection of several French psychiatrists. The resemblance of these works to primitive art is constantly stressed by the author. Thus he describes a number of flint hatchets, strongly reminiscent of Stone Age products. Similarly, many wood carvings of the human form appear to resemble closely certain African figurines. In execution, the majority of the products discussed are stylized and quite sophisticated. Ingenuity in the use of materials is illustrated by a figurine of a singer made out of roots. Ernst (55) also calls attention to this ingenuity in his

discussion of the work of criminal psychotics and feeble-minded, who were necessarily deprived of all dangerous tools. The cases described by Ernst manufactured their own plastic material from paper soaked in water and mixed with flour. Bread was also used for this purpose, and wire was sometimes employed as a foundation. The products were crudely executed common objects, such as pipes, dogs, and puppets.

Vaux (207) describes a collection of articles spontaneously produced by patients in a state hospital. Many are so grotesque and fantastic as to attract attention. Ingenuity in the use of materials, as well as in the construction of tools, was again demonstrated, the patients carving figurines from floor wax or soap, knitting stockings with a hairpin, or weaving baskets from twigs. Vaux also comments upon the great quantity of production, the painstaking and meticulous work, and the beautiful craftsmanship often wasted on shoddy materials, absurd designs, or useless objects. One paranoid schizophrenic, a former machinist, constructed a number of movable structures.* One such structure was a small electric machine which, when connected to a circuit, would turn some balls of colored paper, thus "diffusing faith, hope, and charity to the world" (207, p. 64). Other products represent themes relating to sex, religion, grandiose delusions, battles, and bloodshed. A number of symbols recur in the work of individual patients, such as stars, faces, numbers, and words.

A similar collection of objects is described by Ducoste (50), who tries to show a relationship between the objects constructed and the type of psychosis. He maintains that crude, useful objects, such as hammer or hooks, are made chiefly by simple demented; arms and objects of assault or defense, by paranoiacs with delusions of persecution; and objects of escape, such as keys, by paranoiacs, alcoholics, and epileptics. Moderno (129) describes the wall decorations of a hospital room occupied by a 42-year-old seamstress with religious delusions. All available wall space was covered with figures made up of thread, pieces of material, or printed paper ingeniously employed to represent religious scenes, altars, royal personages, and other subjects related to the patient's delusions. Phrases were also laboriously written out with the same materials.

Vié and Quéron (208) discuss the art productions of patients in the "family colony" of *Ainay-le-Château*. These patients are boarded out in two's and three's in the homes of peasants and woodcutters in the neighboring forest, and help with the daily chores. As a result, such patients have all made an adjustment to normal everyday life on a very simple level.

* Strongly reminiscent of the "mobiles" produced by surrealist artists.

The cases include a wide variety of disorders such as feeble-mindedness, infantile paralysis, senile dementia, arteriosclerosis, as well as a few cases of paresis and schizophrenia. Although a number of curious "inventions" are described, most of the spontaneous productions of these patients lacked the fantastic quality usually associated with insane art. The authors point out that the selection of cases as well as the subsequent adjustment to a relatively normal everyday life probably account for this. They find an analysis of such products profitable because it shows the "mental weakening" occurring during psychosis, without such complicating factors as manic excitation or delusions. Thus the artistic products of these patients show no innovations or originality, but merely copying and the following of past habits. Most of the art work consisted of fairly conventional *wood carvings*, a fact which might, as the authors suggest, follow from the proximity of the forest, although wood carving was by no means common among the peasants and woodcutters with whom the patients lived.

Mention should also be made of "idiots savants" with a special talent in plastic art, the most famous case being Henry Pullen, the so-called "genius of Earlswood Asylum" (180, 202). Although very deficient in other respects, Pullen had extraordinary mechanical ingenuity coupled with talent in drawing and carving. Being deaf, he did not learn to talk until the age of 7. His speech remained extremely imperfect and his vocabulary very limited. He was taught to write the names of simple objects, but any further efforts to teach him failed. During his 66 years at Earlswood Asylum, he produced an impressive array of beautiful and highly ingenious objects, including crayon drawings, carvings in ivory and wood, excellent models of ships, and mechanical contrivances such as a 13-foot "robot" which could be made to execute various movements. One of his carvings, executed at the age of 26, is a representation of the Universe. It consists of a large barge with a well-furnished room in the center, white ivory angels at the prow, a Neptune-like figure at the stern, and forked lightning striking the top. His enduring interest in ships, which he carved in great numbers, is thus reflected in his conception of the world.

CHAPTER VI

ARCHITECTURE AND INTERIOR DECORATION

THE productions of psychotics in the field of architecture are necessarily limited for obvious reasons, although a few curious cases are on record. Weygandt (219, 220) and Fischer (61) have discussed the *Villa Palagonia* which was erected near Palermo in 1770. A contemporary description of this fantastic estate is to be found in Goethe's "Letters from Italy" (67, pp. 467-471), in one of which he reports his visit to the *Villa Palagonia* on April 9, 1787. The construction and furnishing of the Villa were entirely directed by Prince Palagonia, who was put under custody in 1777 as a paranoid schizophrenic and died in 1790. In addition to its fantastic architecture, the house was decorated with about 600 statues of weird monsters, such as men with five eyes, women with three breasts, and strange dwarfs, all executed under the specific instructions of the owner. Palagonia believed that these monsters lived in Egypt and he hoped that his wife would give birth to such a creature. The furnishings of the house were equally bizarre and included chairs with missing legs or with sharp spikes concealed under satin cushions; candelabra which were cemented together out of bowls, cups, and saucers; and a cabinet inlaid with old gold frames cut into pieces. The window sills of the cottages on the estate were oblique and leaned to one side. The edges of all the roofs were embellished with hydras, little busts, and choirs of monkeys playing music. In the grounds stood a figure of Atlas supporting an empty wine barrel instead of the world.

A somewhat similar structure, although erected on a less pretentious scale, is the *Junkerhaus* built in Saxony in about 1890 and described by Kreyenberg (96). Junker, who is also diagnosed as a paranoid schizophrenic, filled the house with strange wood-carvings and paintings of his own making. The furnishings were chaotic and overcrowded, all empty spaces having been filled all over the house. This abhorrence of empty spots may be compared to the "*horror vacui*" observed in many schizophrenic drawings.

Ishikawa (88) discusses a queer house built in Japan by a 59-year-old schizophrenic. This house was built, at great cost to the patient, during the 10 years following the onset of his psychosis. Ishikawa describes the house as being most unlike the general idea of a dwelling and regards

it as the direct product of morbid thought during the 10-year period. Hamilton (71) refers to the Belgian artist Wiertz, who built an imitation ruined castle in Brussels in which one looked through peepholes at fantastic scenes such as "suicide" and "Napoleon in Hell." Other evidence of abnormality is furnished by the artist's repeated visions of a luminous figure which he believed to be the spirit of Rubens. His portraits, on the other hand, were well painted and accepted as conventional art and purchased by the public.

Other fantastic structures, such as an uninhabitable "dream palace" whose construction required 33 years, a series of weird grottoes, a bizarre church, and various public buildings, have been photographed and described (30, pp. 239-240, and accompanying plates), but no psychological or psychiatric study of their designers is available. On the basis of biographical material, however, at least one or two of the builders would be classified as definitely pathological.

CHAPTER VII

MUSIC

STUDIES of musical performance or musical appreciation among the insane are also few.* Lack of the necessary instruments, as well as the much greater difficulty of obtaining permanent records of performance, are undoubtedly responsible at least in part for the meager data in this field. Réja (167), in his discussion of various art forms among the insane, notes that musical composition is quite infrequent. Lombroso (113) maintains that musical ability is often diminished in those who were musicians before their illness, and cites specific cases in support of this point. He contends, however, that insanity may awaken musical talent in persons not previously gifted in this way, and again cites illustrative cases. He observes that paralytics often show a fancy for monotonous chanting and that "in maniacs, acute and joyous notes predominate, and still more, the repetition of a rhythm" (p. 207). Kraepelin (95) calls attention to the paucity of data on musical performance of the insane and points out that both musical execution and musical composition may undergo fundamental changes during psychosis. He mentions, for example, that in dementia praecox, musical performance seems to be lifeless, automatic, and devoid of feeling; in paresis, musical memory and technical skill are lost in addition; manic depressives tend to be careless but display much pathos and force in their musical expression.

Hrdlička (81) includes music, singing, and dancing in his survey of insane art production. With reference to *instrumental music*, he finds that the patients usually prefer simple music, that their execution is relatively mechanical, lacking spirit and feeling, and that original compositions are rare. Such compositions, furthermore, often contain breaches of continuity, uncalled-for repetition, and other chaotic elements. *Singing* is more common, although this ability is usually impaired, the singing voice deteriorating in all of its aspects. *Dancing* is quite popular and greatly enjoyed. Fancy figures are often executed, although Hrdlička observes that these figures are more often suggested by the patient's own delusions than by the music.

Felber (59) regards the insane patient's reaction to music as a "regres-

* We are not here concerned with studies dealing exclusively with the therapeutic value of music; for a discussion of this aspect, see a previous article by the writers (2).

sion" to a more primitive level. In this connection he describes the psychotic's preference for sharp, choppy rhythms and for loud, rough noises, and points out that the sense of rhythm is usually retained after the other musical abilities are lost. He cites a number of examples to illustrate the distortions of musical perception found among the insane. Thus one patient would mistake the songs of birds for a woman singing; to another, high shrill notes suggested the letter *e*, while low tones suggested *o*; another heard high tones as rattling, low tones as humming. One patient reported that he heard no melody, but only dissonances.

In an effort to demonstrate a parallelism between manic excitation and musical "inspiration," Pauly and Hecaen (147) discuss the case of the composer Hugo Wolf and also report a case study of an 18-year-old student, admitted for observation as a manic depressive, who composed music after the onset of his psychosis. In a general discussion of music therapy in insane hospitals, Vinchon (211) cites several cases of creditable musical selections composed by patients. Rush (175) mentions a female patient who sang hymns and songs of her own composition, although she had never given evidence of a talent for music before the onset of her psychosis. Ireland (87) describes several cases of insane or feeble-minded persons who had lost the power of speech and were quite deteriorated in other respects, but could still sing, hum, or play tunes correctly. He suggests: "It might thus be supposed that in the downward progress of dementia the musical faculty would be the last to go" (87, p. 366).

A rather different view is expressed by Legge (107). Being musically trained, Legge was able to transcribe directly the music played by patients. His own observations were made on a number of patients suffering from different forms of insanity and on 50 mental defectives. When comparing the records of the musical performance of these patients with the originals, he found many errors in execution, and concluded that musical abilities deteriorate in many forms of insanity. In some cases, furthermore, the power to perform might remain when all power to appreciate was gone. Thus some patients would play mechanically if put at the piano and given music, but they would never play spontaneously and gave no apparent response to musical performance by others. Similarly, the feeble-minded might become proficient in musical execution, but were unable to derive much aesthetic pleasure from it.

In a general survey of musical achievement and abnormality, Rentsch (168) discusses spontaneous musical compositions by some of his patients and reproduces four sample pages of such work. He reports two cases of patients with no previous musical training who composed music after

admission to the institution. One wrote an "opera"; the other composed a song which Rentsch transcribed. In both cases, Rentsch finds tendencies to musical "verbigeration" and flight of melodies. Spitzka (195) refers to individual oddities in the compositions of insane musicians, analogous to those found in insane writing. Thus one patient observed by him wrote a "money polka," in which a peculiar symbol was inserted among the notes to indicate that at such points bags of money must be jingled to the tune.

Polik (156) describes two cases of patients who believed themselves to be great musicians. Neither had been a professional musician before admission, both having had only the usual music lessons. Both composed a large number of musical selections after institutionalization, without the aid of any musical instrument. One of the two patients, a former army officer, composed about 300 pieces, all of which were recombinations of previously known melodies. Many of these were actually published. The other, a theological student, composed fewer pieces, but tried to heighten their importance by the size of orchestra for which they were written. In both cases, Polik finds poverty of ideas and of melodic conception. The melodies are simple and monotonous, the patients trying to compensate for this by the introduction of dissociated or of technically difficult passages.

In a later study, Polik (157) reports the case of a manic depressive patient with paranoid delusions of grandeur and persecution who had been a cabaret singer, among his other occupations. The patient had delusions of being a great musician. In his more lucid intervals, he played the piano and violin with exaggerated emphasis and gestures. His own compositions were not very original, but some were not particularly bad. He was rather inexact and uncritical of his products. He did not bother much with technique, but accentuated the affective aspect: tempo and tune were markedly increased in order to emphasize special emotional passages. In spite of his simple mental make-up, however, he was still able to present the characteristics of his melody and to put his composition on paper.

A different approach is illustrated in the work of Sacristán (177), who made a geneological study of a musical patient with catatonic schizophrenia. A survey of the family history for three generations revealed a number of cases of musical talent consistently combined with auditory hallucinations. The author suggests the possibility that such hallucinations may have been the expression of an "acoustic eidetic disposition" which may also have played a part in the musical talent of these individuals.

"Idiots savants" with pronounced musical capacity combined with mental deficiency have been repeatedly described. Trélat (203) reports in some detail the case of a crippled imbecile woman at the Salpêtrière with a

remarkable musical aptitude. This patient sang so well that she received many visitors who came either to have their own singing errors pointed out or to admire the patient's performance. Among her visitors were the musicians Liszt and Meyerbeer. The case of another imbecile who was able to catch and reproduce any air he heard and to play two tunes on the piano simultaneously is described by Barr (31). These cases have also been described by Tredgold (202). A number of additional cases, reported by other early writers, are briefly cited by Wallaschek (216). Felber (59) cites the case of an idiot child who could hardly articulate the words "papa" and "mama," but could sing 50 melodies without words, including folk songs, hymns, and even arias from operas.

Recently a similar case has been investigated by Minogue (128) with standardized intelligence tests. This was the case of a boy from an intellectually superior and musically gifted family. As a child, the boy was intellectually normal and gave evidence of musical talent from an early age. When three years old, he had pneumonia and meningitis, and since that time underwent steady mental deterioration. Upon institutionalization at the age of 14, his I.Q. was 62; at the last testing, when the subject was 20 years old, his I.Q. had dropped to 46. His memory was excellent, however, and he retained his musical ability throughout. Although never known to compose a piece, he was able to play very difficult music either by ear or by sight.

CHAPTER VIII

WRITING

MATERIAL on the literary productions of the insane is plentiful, although this field has not aroused such widespread interest as their drawing behavior. Attention should be called at the outset to certain differentiations which can be made within the subject matter of this field. The spontaneous writings of the insane might be considered from the viewpoint of *content*, *literary style*, or *handwriting and graphic disorders*. The first two aspects are more relevant to our central theme of creative activity and artistic production. Graphic peculiarities, on the other hand, are intimately related to drawing and it is often difficult to draw the line between the two. In the present survey, the chief emphasis has been placed upon the literary aspects of writing, although material on the graphic aspects has been included whenever it appeared most relevant to drawing behavior. Another field of investigation which borders upon the present topic is the study of *aphasias* and similar language disorders. No attempt has been made to survey the extensive literature in this field, although some of the material on aphasias which was most closely related to the creative aspects of writing has been cited incidentally.

1. *General Surveys and Group Studies*

Tardieu (201), Séglas (186), and Rogues de Fursac (170) discuss literary production in their analyses of disorders of writing and speech in the insane. They are more largely concerned, however, with disturbances in spelling, copying, writing from dictation, and other relatively simple processes than with creative work. In an investigation of writing disorders with 30 schizophrenics, Cuatrecasas and Bula (42) required the subjects to write the same sentence repeatedly from dictation. Both handwriting disorders and syntactic disorders, such as repetition or omission of words or syllables, were found. In cases showing intellectual deterioration, the different stages or degrees of the psychosis revealed a regressive evolution of language development.

In their general treatise on aphasias, Ballet and Laignel-Lavastine (28) point out that in writing from a sample, some aphasics copy the printed letters as though tracing a design, while others transcribe the material into script, a distinction which the authors consider significant. The graphic

aspects of insane writings are also discussed by Spitzka (195). In paranoia, for example, he notes that the paper may be covered with underlinings, question marks, exclamation points, dashes, and strange symbols. Some patients write with almost microscopical fineness, others very coarsely, still others combining these extremes in the same specimen. One patient observed by Spitzka used the same page six times, writing once transversely, then longitudinally from top to bottom, then longitudinally from bottom to top, then upside down, and twice diagonally. In another case, that of an insane author who printed his own book, every form and variety of type was employed, a frequently reported characteristic in insane writings. In a discussion of graphology and psychoanalysis, Mendelssohn (126) undertakes to show that the personality changes occasioned by psychoanalytic treatment are reflected in the patient's handwriting. Two illustrative cases are described, with handwriting specimens showing the progressive changes in the course of psychoanalysis.

Raggi (163) made a systematic analysis of the writings by institutionalized insane patients, illustrating his discussion with specific cases from his own observation. He finds writing to be very common among the insane, particularly among manics and monomaniacs; he reports it to be rare or unknown among melancholics and those in a state of stupor or extreme dementia. With reference to *subject matter*, he classifies such writings into: (1) letters, including accusatory and persecutory themes; (2) special productions by paranoiacs, such as poems and cabalistic writings; and (3) prophecies, abstract themes, diaries, and autobiographies. Each of these forms of writing is analyzed and illustrated. Raggi then discusses *previous education* of the patient in relation to his writings, and *truth* in insane writing, the latter being influenced by voluntary misstatement, hallucinations, illusions, and loss of memory. *Errors* are classified into: (1) logical, including defective association and imperfect reasoning; (2) grammatical; and (3) orthographic, including peculiar arrangement of letters and words, size irregularities, and similar peculiarities. Finally, *diagnostic and prognostic value*, as well as *indices of different forms of insanity*, are discussed. The importance of comparative material from the pre-psychotic writings of the patient is stressed throughout.

Marcé (116, 117) also considers both *content* and *graphic form* of insane writings, and emphasizes the diagnostic value of such writings in cases of contested wills and other legal problems. Several such analyses of wills by psychiatrists are cited. Differential characteristics of the various forms of insanity are described. Marcé also calls attention to the necessity of comparing the patient's writing before and during the psychosis, in order

to evaluate properly the various peculiarities which may be found. Marvin (124) gives a general discussion of the literary productions of the insane, finding this form of expression to be most common among melancholics and epileptics. He points out that the writings of the latter abound in visions, revelations, and religious dreams. He cites many cases of epileptics to show how the angels, fiends, and spirits which figure in such writings can be traced to the illusions, hallucinations, and delusions of the epileptic aura. Characteristics of the writing in other forms of insanity are also discussed from the viewpoint of both content and appearance. In a treatise on diagnosis and therapy of mental diseases of children, Ziehen (226) states that the writings of hebephrenics are frequently even more confused than their speech, and refers to such characteristics as neologisms and stereotypy.

Régis (164) collected a large number of writings by the insane. Apart from their orthographic characteristics, Régis believes that such writings afford an excellent insight into the mental state of the patient since most individuals are less reticent in writing than in talking about themselves. In most cases, he finds that the insane show remarkable gifts for literary expression and can often describe their symptoms with admirable clarity. He reproduces in full the clinical history of each of 7 patients, written by themselves. These cases were selected as "typical" examples of different clinical groups, and include: "hallucinated neuropathy," "*folie religieuse*," "*folie du doute*," two cases of alcoholism—one a well educated man and the other a poorly educated laborer,—manic excitation, and a paranoiac with delusions of grandeur and moral insanity. In the report of the last named case, two biographies are included, one of the patient's real life, written in his own name, and the other of his pathological "reincarnation," written under a new name.

Garnier (66) is also more concerned with the ideational content than with the graphic aspects of insane writings. He discusses the following clinical types, illustrating each with specific cases and reproducing specimens of prose and poetry: (1) "graphomaniacs with mental imbalance" (4 cases); (2) chronic delirium (5 cases); (3) manics (2 cases); (4) general paralysis and dementia (3 cases). Garnier considers writings to be of great diagnostic value, even when the mental disorder does not show up clearly in other forms of expression.

From his observation of a large number of specimens of insane writings, Lauzit (106) concludes that such production is usually limited to chronic manics, paretics, paranoiacs, hypochondriacs, and certain demented. He believes that it is the chronic and incurable cases, as a rule, who do most

of the writing. He describes in detail 16 cases, classified as follows: (1) "expansive," including manics and paretics with ideas of grandeur; (2) "depressed," including hypochondriacs and persecutory manics; (3) demented; (4) general paresis. All of the specimens of writing reproduced are *letters*. Lauzit concludes from this survey that writings are a useful diagnostic device, most of the patients manifesting their delusions in their writings. In those cases in which the content of the writing is normal and reasonable, the orthography may reveal the patient's abnormality. Lauzit mentions especially the arrangement of the writing, manner of folding the paper, numerous erasures, deformation of letters, frequent underlining, and unusual use of capitals. Letters written by insane patients, as well as wills, are also discussed, with illustrative cases, by Magnan (115), by Legrand du Saule, Berryer, and Pouchet (108), and by Guislain (69). Most of these letters were persecutory and accusatory, several of the patients continuing to write such letters after their discharge from the institution.

Köster (94) discusses both mechanics and content of writing as a means of differentiating various mental diseases, illustrating his analysis with 41 case reports and 81 specimens of writing. Among the syndromes represented are general paresis, cerebral tumors and brain injuries, cerebral apoplexy, multiple sclerosis, senile dementia, delirium tremens, epilepsy, hysteria, chorea, manic depressive psychosis, paralysis agitans, dementia praecox, paranoia, and feeble-mindedness.

In his treatise on mental pathology, Ballet (27) discusses the writings of the insane in some detail. He observes that, in general, the insane write extensively, the most prolific writers being excited manics, hypochondriacs, and paranoiacs. Certain patients cannot resist the impulse to cover entire pages with undecipherable scribbles. Letters are among the most common types of writing, frequently taking the form of petitions, reclamations, or accusations. Among the aspects of such letters which may show characteristic abnormalities, Ballet discusses: annotations and post-scripts, address of sender, date, signature, address of correspondent, and length—which often attains colossal proportions. Other writings include diaries, verse, essays, wills, and mystic documents. Among the general distortions found in such writings, Ballet mentions: irregular and fantastic arrangement of words; the use of differently colored inks, blood, burnt matches, and similar writing materials; peculiarities in fastening or tying sheets together; malformation of letters; meticulousness; voluminousness of writing; stereotyped expressions; neologisms and mystic symbols; puns, proverbs, allegories, and double-entendres; modifications of syntax and spelling ("literary stuttering"); and predominance of the deliriant theme. Ballet

calls attention to the necessity of considering pre-psychotic writings by the patient and to the need for repeated observations, because of the possibility of simulating insanity or sanity in writing and because of the variation in the writings by the same patient at different times.

Vinchon (213) gives a general discussion of insane writings, illustrated by specific cases. He finds writing to be more common than drawing, and attributes this to the fact that language habits are established so firmly and so early in the life of the individual that they are among the last to disappear in the development of the psychosis. He notes that such writings are most frequently confessions, memoirs of a self-justificatory nature, or poetry. As in his analysis of drawing, Vinchon maintains that the specific clinical types reveal their characteristic symptoms in their writings. Thus manic flight of ideas is shown by sound associations, play on words, and morbid gaiety; verses written by a depressed patient, on the other hand, portray a sharply contrasted mood. Protests and persecutory treatises abound among paranoiacs. Descriptions of an imaginary world written by a schizophrenic are cited. Among the characteristics of schizophrenic writings, Vinchon reports: repetition of words, the insertion of fabulous figures, peculiar orthography, absence of punctuation, decorative scrawls, lack of connection among facts and poorly coordinated whole, and irrelevant titles. As intellectual deterioration progresses in schizophrenia, neologisms and stereotypy become more common.

A large number of literary specimens were included in the extensive collection assembled by Karpov (91), which was discussed in a preceding section. Both prose and poetry are included, with illustrative case studies. Among the chief schizophrenic characteristics, Karpov mentions neologisms, new alphabets, and stereotypy. The case is reported of a former railroad engineer who wrote ream upon ream of poetry after the onset of general paralysis, although he had never showed an interest in poetry before his illness. His work was technically good, and eventually achieved excellent meter and rhythm. Similar examples are cited from other psychoses, and especially from manic depressive insanity, which Karpov considers particularly conducive to creative activity.

Moreau de Tours (131) likewise maintains that certain pathological mental states, operating in a manner similar to the effects of alcohol, caffeine, and drugs, may stimulate the individual to achievements of which he would be otherwise incapable. In support of this point, he cites a number of case histories taken from several French institutions for the insane. In cases of extreme dementia, he finds evidence of deterioration in the writings, as indicated by neologisms, incoherence, and superficial asso-

ciations. Those patients in whom intellectual deterioration was not very marked, however, often produced very creditable poetry, not only in their more lucid intervals, but even at times in the midst of their manic excitation. Nisbet (142) likewise describes a number of patients who manifested remarkable ability in composing poetry or, less frequently, prose, after the onset of their psychosis.

2. Case Studies: Poetry

Special case studies in the field of literary production have been largely limited to poetry, probably because of the greater flexibility of this medium. It would seem that variations in style and divergence from conventional patterns are aesthetically more acceptable in poetry than in prose. The poetic productions of the insane would therefore be more likely to arouse interest, whereas their prose would tend to be ignored as merely incoherent. A number of cases are on record of insane persons who have produced poetry of considerable merit.

Hinrichsen (78) discusses the poetic work of a schizophrenic who had been employed as a technical draftsman before the onset of his psychosis. Ten volumes of this patient's poetry were published, and attracted favorable literary notice. In his analysis of the poems, Hinrichsen finds evidence of homosexual ideas and schizophrenic disturbance of the "ego." As the psychosis progressed, the terminology of the poems became increasingly neologistic, queer, far-fetched, and unreal. Composite terms were common, many of them being compounded with the term *ego*, such as ego-existence, ego-revelation, ego-assertion, ego-mankind. Hinrichsen attributes this to the patient's insecure "ego-consciousness," the poet turning farther away from reality and concentrating on his "disintegrating ego" as his autistic tendencies became stronger.

Four case studies of patients who wrote poetry are reported by Kerschbaumer (93). The diagnosis of the patients varied, three of them showing some schizoid traits. The condition of the fourth was very much improved and this was reflected in the normal character of her poetry. Among the schizoid characteristics noted in the work of the first three cases, Kerschbaumer calls attention to: neologisms; the use of foreign terms and stilted expressions; flowery, verbose speech, with many superfluous words; slang, tending to the vulgar erotic; and abnormal division of lines, such as separating the verb from its object in the phrase "to help you." Internal inconsistencies were also noted, the content being meaningless in spots and becoming coherent in other parts of the same poem. One patient used

progressively smaller fractional units to refer to aspects of the individual's personality, such as "the better 7/8ths," 14/16ths, or 28/32nds.

Quercy (162) reproduces several poems by a 68-year-old paranoiac who had only an elementary school education and had been institutionalized for approximately 30 years. The patient wrote very fluently and was able to compose poetry when directed, without hesitation and without repeating himself. The poems showed a great facility in rhyming, good meter, and an extensive vocabulary. Common disorders occurring both in his poems and in his ordinary speech included neologisms, distorted words, and misuse of normal words such as "circumference" and "zenith." Quercy concludes from his observations of this case that serious disorders of intellectual functions are compatible with a remarkable richness of vocabulary and of grammatical combinations, and an over-development of verbal aptitude.

A similar case is that of an uneducated female paranoiac, a member of a notorious family of criminal insane, all of whom were institutionalized (13). The patient herself had had ideas of persecution and religious delusions since the age of 11, when she first thought herself to have been transported to the "world of abysses." This world she describes in a long poem of six chapters. Her other poems are on the same theme, bearing such titles as "Appendix to the Abysses of Space," "The Funnel Abyss," and "The Jolting Abyss." The poems are well written and technically good with respect to rhyme, meter, choice of words, and figures of speech. Earle (51) discusses several cases of mental patients who showed poetic inclinations, citing examples from their work.

Poems composed under special circumstances have been described in a few cases. Sanchis Banús (179) reports the case of a male schizophrenic with very little education. When first admitted, this patient showed the mutism and stereotyped attitude of extreme catatonia, replying to all questions by a single gesture and staring motionless at the sun for hours. After two months, he was able to answer a few questions, his speech revealing echolalia, perseveration, and incoherence. On one occasion, he was heard reciting what sounded like verse. When asked to repeat this on the following day, he did so. This "poem," consisting of 29 lines, had a rough rhythm and rhyme which were interesting. Its content was incoherent, revealing no logical association of ideas, and was interspersed with morbid fragments. A parallelism between manic excitation and poetic "inspiration" is noted by Pauly and Hecaen (147), who discuss the verses composed by an 18-year-old student admitted as a manic depressive to an observation ward.

Hinrichsen (79) refers to the case of a 24-year-old unskilled laborer who produced, in the course of psychoanalytic treatment, a dialogue which could be classified as poetic output. The patient had never done any writing previously, his own production coming as a surprise to him and having been executed more or less automatically. Pailthorpe (145) gives a psychoanalytic interpretation of a published poem written by one of his patients during the course of psychoanalytic treatment.

A number of case studies trace the course of poetic production before and after the onset of psychosis as well as during successive stages of deterioration or recovery. Pinel (155) cites the case of a young girl who, during paroxysms of insanity, "expressed herself in very harmonious verse," but lost this ability upon recovery. A number of similar cases are reported by Winslow (222, *pp.* 168-174). Schneider (183) discusses the poems written by a 21-year-old girl during the initial stages of schizophrenia. At this time, the subject composed about a dozen poems which were artistically pleasing and coherent, although they already revealed incipient schizoid traits in their content and feeling tone. Thus she refers to herself as being "Broken off from the tree of life, a leaf that sways in the storm," or writes "And always again after a glimpse of sunshine, the dead and horrible night." After the definite outbreak of her psychosis, the patient ceased to write poetry. Stertz (198) discusses two schizophrenic patients, one of whom showed a gradual disintegration of poetic production as the psychosis progressed. The other wrote poetry which was of the same style just before the onset of the psychosis and immediately after recovery, but produced no poetry at all during the acute stages.

Capgras (39) points out that normality of writing does not preclude a diagnosis of insanity and that the time of onset of a psychosis cannot be estimated in retrospect from an examination of the patient's writing. He describes the case of an intelligent, well-educated paranoid schizophrenic whose writing showed no disturbance until 7 years after the onset of psychosis. The patient wrote prose and poetry of excellent form at a period when she was otherwise quite deteriorated both intellectually and emotionally. Capgras traces the gradual appearance of signs of abnormality during the 7-year period and reproduces specimens of the writing. In a later article on the same patient, Capgras (40) reproduces a short play and a poem. Although fairly intelligible in their general idea, these compositions contained many incoherences in detail, such as sound associations and verbal analogies. Capgras calls attention to the fact that the patient composed this material very fluently, the play having been written in

three hours with only a few corrections, and the poem in less than one hour and with no erasures.

Boulenger (35) maintains that there is a stage during incipient or mild psychosis when the stimulus to literary production is at its maximum. He illustrates his point with the case of a 24-year-old paranoiac with alcoholic complications. The patient had only an elementary school education and had been employed as a joiner in a spinning mill. He had never before attempted literary production and his reading had been very meager. Upon admission to the hospital, he composed poems which seemed to indicate complete momentary absorption in a single sense modality or set of sensory impressions. Thus some of his poems were exclusively visual, others auditory. One poem gave a very vivid auditory impression of the men's ward at about 3 P.M. As the psychosis progressed, this poetic production ceased completely.

3. Case Studies: Prose

Individual case studies on prose writing are relatively scarce, although published records of such writings are often available for direct reference. Peterson (148) studied a 30-year-old religious paranoiac, a former farm laborer with an elementary school education. During his last two years at the state hospital, before his removal to a county asylum, this patient wrote a lengthy and elaborate autobiography entitled "The Piling of Tophet and the Trespass Offering." This was first written in cipher on brown wrapping paper, then transcribed neatly on note paper and bound by the patient into a 400-page volume. The book is described as being "remarkable for its excellent literary style and for its keen reasoning and psychological analysis of his (the writer's) own disordered mind" (148, p. 196). Beginning with infancy, the patient describes his own development up to the time of writing, giving his delusions in great detail. Although the patient himself regarded the book as the autobiography of a new prophet and the revelation of a new religion, occasional flashes of insight are discernible in which he refers to himself as insane and a monomaniac.

Letters, poetry, and conversations by 26 insane patients were reproduced in the *American Journal of Insanity* for the years 1847 and 1848 (5, 6, 7). Samples or facsimiles of letters or other prose writings have also been reproduced, together with case history material, in a number of journals and texts (14; 41, p. 166; 90; 132; 169; 176; 222, p. 170; 158). The majority of such writings are persecutory and accusatory, and frequently show hallucinations, flight of ideas, and symbolism. Incoherence, grammatical

errors, misspellings, and missing words are noted, as well as the insertion of foreign words, numbers, or drawings. Among the other peculiarities of form are mentioned: large number of paragraphs, series of dots, queer punctuation, elaborate and fantastic signatures, and writing the subject matter of the letter on the envelope. Sufficient material is available in certain cases to show progressive deterioration with the development of the psychosis (cf., e.g., 14). The case of a 30-year-old laborer with "primary dementia" whose writing clearly showed progressive deterioration with the development of his psychosis is described by Sommer (194).

The specificity of language disturbances is illustrated by the case studies of three paranoid dementia praecox patients reported by Latapie and Leclerc (105). The authors conclude that, although the written language of schizophrenics is more frequently disturbed than their spoken language, the reverse is sometimes true, and either alone may show disturbances. Rambling speech may precede rambling writing, but when the writing does deteriorate, it may become even more incoherent than the speech. Thus, in comparing disturbances in different patients, the state and development of the psychosis must be considered. Since some individuals are able to express themselves better in one way than the other, furthermore, the patient's aptitudes and training must also be taken into account. A further specificity is illustrated by two cases, presented by Vie and Raucoule (209), showing incoherent speech and writing only when the patients' paranoid ideas were concerned. One patient could give a coherent oral report of her past; the other could write sensible letters home, but filled her notebook with unintelligible and symbolic writing. Specimens of both patients' writings are given.

4. *Published Writings*

A further source of material is to be found in the published writings by the insane. In 1860, Delepiere (45) compiled a literary history of the insane, in which he summarized their writings under four categories, *viz.*, theological, "belles lettres," philosophical and scientific, and political. He confines his survey to persons who exhibited "marked and unquestionable derangement," most of the cases having been actually committed as insane. The cases were taken from a number of countries and cover a period extending back to the Middle Ages. In addition to titles, descriptions, and quotations, Delepiere also gives as complete a biographical case report on each individual as the available data permit. This is thus a good source book for much of the early material, although no psychological evaluation is given.

Lombroso (113) discusses at some length the productions of "literary mattoids," whom he regards as being on the borderline of insanity. It might be noted that most of the cases cited in this category showed clear-cut symptoms of psychosis and were not merely eccentrics. Lombroso bases his observations on his own collection of 186 books by "mattoids." Classifying these books with reference to subject matter, he finds that 51 are on personal topics, 36 medicine, 27 philosophy, 25 lamentations and complaints, and the remainder deal, in decreasing number, with drama, religion, poetry, astronomy, physics, politics, rural affairs, veterinary medicine, literature, and mathematics; there were also one grammar and one dictionary.* Lombroso points out that while poetry prevails among the definitely insane, theology and prophecy are most common among mattoids, as are also, to a less extent, the more abstract, uncertain, and incomplete sciences. Mattoids often choose topics foreign to their own field or occupation, and prefer the more grotesque, uncertain, or insoluble questions. Among the special peculiarities of mattoid and insane writings, Lombroso mentions: queer signatures; neologisms; eccentric handwriting; peculiar arrangement of words; underlining or the use of large type; the introduction of drawings and numbers in the verbal material; exuberant titles; stereotyped repetition of words or phrases hundreds of times on the same page; puns, superficial associations, and alliterations; and inversion of word order. He also calls attention to the copious output of many of these writers.

Wundt (225) discusses the disruption of the associative mechanism which he regards as a common feature of mental disorders and which is illustrated in the language of the insane by flight of ideas, sound associations, superficial associations by similarity and contiguity, and neologisms. He points to the printed writings of the insane as an excellent record of the decay of intellectual functions. As an example, he cites a "privately printed" book, which he chanced to observe, showing progressive change from the opening sentences "correct in form and expression," through descriptions of hallucinations, linguistic solecisms and disconnected associations, to the last few pages on which "there is not a single sentence that is brought to its correct grammatical conclusion" (pp. 320-321).

Laignel-Lavastine and Vinchon (102) discuss a book published in 1821, entitled "Les Farfodets" (the goblins), representing the detailed autobiography of a typical paranoiac. This book, which recalls the demoniacs

* Lombroso also cites similar statistics compiled by Philomneste, giving a list of all such books known in Europe. These are classified as follows: theology 82; prophecy, esoteric, and mystic 44; philosophy 36; politics 38; and decreasing numbers in poetry and drama, language and grammar, literature, hieroglyphics, astronomy, aeronautics, chemistry, physics, zoology, strategy, chronology, hygiene, pedagogy, and archeology.

of the Middle Ages, was the subject of many studies. The book was illustrated by nine lithographs executed under the author's direction, all showing him in a room with goblins, the latter being represented either directly or in such disguises as a bat or monkey. An example of the writer's delusions of persecution is to be found in the preface of the book, in which he accuses Pinel, under whose care he had been, of having made him submit to many cruel tortures.

Behr (33) discusses a number of published writings by paranoiacs, giving the case histories of the writers. Since their style is usually logical, such writings have frequently been accepted as normal when other facts about their authors were not known. Among the special peculiarities of such publications, Behr mentions the writer's constant reference to himself throughout the work, as well as the presence of a firmly entrenched system of ideas at the basis of the discussion. Some of these writers use their own peculiar lettering, often mixing several types, such as Gothic and roman. Richet (169) likewise calls attention to orthographic peculiarities in certain printed works by the insane. He points out that the subject can rarely find a printer who will cater to his eccentricities; but when he does so, the printed works show the same peculiarities commonly found in the handwritten products by the insane. Two cases are cited, with specimen pages, showing the use of series of dots, frequent exclamation points, excessive division into paragraphs, mixture of capitals and small type, and the combination of a wide variety of characters. One page contained 12 different characters in 17 lines, another 11 characters in 12 lines.

Mention should also be made of the case studies by Hinrichsen (78) and by Pailthorpe (145) reported in Section 2 above. The former dealt with two volumes of verse published by a schizophrenic; the latter with a poem, appearing in a literary magazine, which was written by a patient in the course of psychoanalytic treatment. The recently published diary of Vaslav Nijinsky (141), the former Russian ballet dancer, was written after the onset of his religious and persecutory delusions, while he was confined in a Swiss sanitarium. Nijinsky's wife, who edited this diary, writes in the preface: "In editing this *Diary* I have kept to the original text and used, as far as possible, the same expressions as Nijinsky himself" (141, p. xiv). The book throws a certain amount of light upon the nature and development of the patient's delusions. It is somewhat rambling in style and is devoted largely to a subjective description by Nijinsky of his feelings and attitudes.

As an illustration of the fact that apparently normal writing does not preclude insanity, Green (68) and Hay (75) refer to a speech made by a

paranoiac woman before an American State House of Representatives. Because of the logical presentation of the speech, none of the listeners suspected that the subject was insane, although she was subsequently committed. Such an observation is not uncommon. The normality of the letters and other writings of some patients who are otherwise clearly psychotic has been discussed and illustrated by Brierre de Boismont (36), Marcé (116), Moreau de Tours (135), and others. In this category can also be included the diary notes written by institutionalized patients, describing in an accurate and objective manner their own behavior and that of other patients (8, 10). Mention should also be made of a series of three articles recently appearing under the pseudonym of Lang (103, 104), in which the author, a 32-year-old schizophrenic with paranoid and catatonic trends, describes his own case in some detail and suggests explanations for the symptoms. This subject had received three years of college education and had read widely in abnormal psychology and psychiatry. A number of short autobiographies and case histories written by patients *after* recovery have been published from time to time. As early as 1832, Ideler (85) reproduced such an autobiography by a patient formerly under his care. Similar case reports are given, with introductions and comments, by Engelken (53) and by Aubanel (26). Others have appeared anonymously in several psychiatric journals (9, 11, 12).*

A collection of 40 books or pamphlets written by insane persons are on file at the Army Medical Library (Library of the U. S. Surgeon-General's Office) in Washington, D. C.** In some of these cases the writer is definitely known to have been institutionalized and a certain amount of information is available regarding his case history. It should be noted that these writings do not differ in any consistent way from the works of the remaining cases, for which no commitment data or other items of information are available. It seems probable that many of the latter writers were never institutionalized and would therefore be more nearly like the "mattoids" of Lombroso. In style, the entire set of writings ranges from fairly logical exposition which cannot be differentiated from the writings of an over-zealous and over-emotional religious fanatic, to confused, disjointed,

* In this connection might also be mentioned those individuals who have been temporarily institutionalized for mental disorders and have subsequently published well written autobiographies which have attracted the attention of literary critics as well as the general public. Among such books may be cited:

Beers, Clifford, *The mind that found itself*. Garden City, N. Y.: Doubleday, Page, 1925. Pp. 114.

Vidal, Lois, *Magpie*. London: Faber and Faber, 1934. Pp. 493.

** These writings have not been listed in the bibliography of the present article. Such a listing can be found in the *Index-Catalogue of the Library of the Surgeon General's Office* (86): Series 1, 1885, vol. 6, p. 944; Series 2, 1903, vol. 8, pp. 1-2; Series 3, 1926, vol. 6, p. 1079.

deteriorated writings, replete with neologisms. With reference to subject matter, over one-half are of a religious nature, including also a number of "prophecies." A small group deal with personal material, including diaries and autobiographies as well as justifications and accusations concerning the patient's institutionalization. A few volumes of verse are also to be found. The remaining works consist of essays on political and social questions and relatively abstruse aspects of science, such as new "systems" of phrenology and character analysis, magnetic and telepathic forces, the quadrature of the circle, and the like.

5. *Institution Journals*

Relevant material is also to be found in the journals published by patients in insane hospitals. Delepiere (45) describes several of these, including *The Morningside Mirror* of the Royal Edinburgh Asylum, and *The New Moon* published at the Crichton Royal Institution. A review of the first number of the *Memoirs of mad philosophers, mad kings, etc.*, a series of Crichton Institution biographies, appears in an article by Winslow (221). Lombroso also refers to this type of journal in his discussion of insane writings in "The man of genius" (113).

In an article appearing in 1876, Andrews (4) gives an historical account of asylum periodicals in the English language, obtaining much of his data from the annual reports of a number of American and English institutions. The earliest journal to which he refers is the *Retreat Gazette*, begun in 1837 by a patient at the Connecticut Retreat, in Hartford, Connecticut. In 1842 appeared the *Asylum Journal*, at the Vermont Asylum, Brattleboro, Vermont. The other American periodicals cited by Andrews include *The Opal*, begun at the New York State Asylum in 1851, *The Meteor* of Alabama State Hospital, and *The Friend* of Pennsylvania State Hospital; both of the latter first appeared in 1872. Among the English periodicals discussed are: *The New Moon* (1844),* *The Morningside Mirror* (1845), *Excelsior* (1857), *The York Star* (1857), and a few other journals printed at small private institutions. Andrews points out that at the time, six such journals were being printed in the United States and Great Britain. It is interesting to note that a number of these periodicals were begun by patients who had formerly been printers or editors. It should also be noted that some of the journals are reported to have been discontinued because the patients who had been contributing to them had either been discharged as cured or had deteriorated. Andrews decries the fact that such publications are too often "edited" and that the editor is usually relatively sane. He

* The figures in parentheses give the date of the first appearance of the journals.

maintains that in order to be of greatest value they should contain "the delusions, the vagaries and incoherences of the insane mind" (4, p. 49).

Vinchon (215) describes *Le Glaneur de Madopolis*, published at Charenton, and the *Ecos de las Mercedes*, published by the patients at the Mercedes hospital in Buenos Aires. The latter attracted the notice of literary critics and is of particular interest because of a large number of articles about insanity written by the patients. Many specimens of prose and poetry from *Le Glaneur de Madopolis* are reproduced by Sentaux (187).

Seven volumes of *The York Star* published between 1861 and 1867, as well as Volumes I-X of *The Opal* (Volume I incomplete), covering the years 1851 to 1860, are on file at the Army Medical Library, Washington, D. C. Both periodicals contain poetry, essays, and short articles on a wide variety of topics. Current events, political and social affairs, games and entertainments, literature, and history are among the fields covered. A few of the articles in *The Opal* deal with the subject of insanity, a topic not infrequently discussed in such journals. Both journals are written in a serious style and give but little evidence of mental abnormality. The use of stilted, flowery language in some of the articles might be noted.

Similar journals are printed at the present time in a number of American hospitals for mental cases. As an illustration of such a current journal may be cited *The Referee*, a mimeographed weekly paper prepared by patients at Saint Peter State Hospital, Saint Peter, Minnesota. This paper contains cartoons, jokes, poems, announcements of local events, articles about members of the staff, brief discussions, and editorials, the bulk of the work of writing, drawing, and editing being done by a single patient.

CHAPTER IX

SUMMARY AND EVALUATION

SOME of the chief points which have been brought out by the present survey of spontaneous art productions by the abnormal will be summarized briefly.

(1) The *specificity* of abnormal behavior has been repeatedly illustrated. Thus it is found that the artistic production of certain psychotics is indistinguishable from that of the normal in both style and content, although the behavior of the patient in other situations may be distinctly abnormal. Instances of this observation have been cited in almost every form of art which has been investigated. This finding is all the more significant insofar as "normal" productions by patients are less likely to be selected for discussion in the literature than their more bizarre and unusual achievements. This specificity of abnormality has been found, not only in the comparison of artistic and non-artistic behavior, but also among different art forms and within a single art form.

(2) The artistic behavior of many insane patients, on the other hand, often reveals many of the specific features found in their other behavior. Among the characteristics of insane art most commonly reported may be listed the following: incoherent, inconsistent, and chaotic organization; incomprehensible mixture of fragments of objects or persons; lack of integration; distortions of perspective; ideoplastic rather than physioplastic representation; disproportion of body parts; lack of symmetry; exaggerations; individual mannerisms and idiosyncrasies; neologisms; untidiness; crude, naïve, schematic representations; stiffness; absurdity and grotesqueness; baroque over-elaboration and ornamentation; uniformity and monotony; stereotypy and perseveration; the production of "chain" figures and "grape-like" or "cauliflower" formations; minuteness of detail and meticulous execution; stylized, abstract, geometrical representation; originality, bizarreness, eccentricity; obscenity; obscure and exaggerated use of symbols; unnatural, fantastic, and violent use of color; unusual and curious use of materials; autism; free association and flight of ideas; "horror vacui" or the compulsive filling in of all available space; reliance upon fortuitous arrangements, such as clouds, smoke, spots on paper; inclusion of letters, words, and algebraic symbols in drawings; evidences of motor incoordination and tremors in certain organic cases. Stylistic resemblances have been

noted between such products and those of children and primitive groups; similarities to automatisms, such as "doodling" and trance activities have also been pointed out. With respect to subject matter, the peculiarities most frequently cited are: representation of delusional ideas; reproduction of hallucinations and illusions; predominance of religious themes, allegories, supernatural and fabulous creatures; the ambitious projects, maps, and plans of the paranoid cases; portrayal of gory, gruesome objects, as well as scenes of ruin and catastrophe; sexual themes and obscenity.

(3) Clear-cut clinical pictures, however, do not usually emerge from a study of artistic productions. Although several writers have undertaken to set up diagnostic indices on the basis of such products, overlapping among the different psychoses is large and the exceptions to most generalizations are many. This is not surprising since the classification of abnormal behavior into distinct clinical types is itself often a difficult and somewhat artificial procedure.

(4) The combination of more than one medium of expression, especially writing and drawing, is relatively common. A number of conditions may contribute to such a multiplicity of expression. The difficulty of execution resulting from lack of adequate training is a factor which cannot be discounted. Another factor may be the cryptic and unusual nature of the subject matter itself, whose depiction or expression may not have been conventionalized. In certain cases, the patient's excessive zeal to communicate his experiences may also induce him to turn to any available means rather than restrict himself to a single medium.

(5) The overwhelming urge to produce, manifested by certain patients, is itself worthy of comment. This is demonstrated both by the excessive amount of products made by some patients, and by their ingenious adaptation of unusual materials when the appropriate ones are not available. Thus patients will draw on walls, pieces of old sheeting, or the backs of envelopes, when drawing paper is not available. When paints or pencils are not present, burnt matches, and even blood, have been used for this purpose. Bread, paper soaked in water, flour, floor wax, roots, and ravelings have been variously employed when the more conventional materials were inaccessible. Here, too, a number of different factors may operate. The patient's general difficulty in social communication, as well as the strongly emotional tone of some of his experiences, may contribute towards this over-productivity. Nor can we ignore the undoubted influence of the immediate environmental situation, which includes such factors as confinement, change of scene, lack of adequate occupation, removal of practical and financial considerations, etc.

(6) Many cases have been reported of patients whose artistic production showed an improvement after the onset of psychosis. This was particularly true among patients who had had previous training in technique and in whom mental deterioration had not progressed very far. The products of such patients are often described as being more imaginative, original, novel, and interesting than those produced by the same individuals before the onset of psychosis, and they have sometimes been judged to be "better art." In their general technique, such products tend to be abstract, stylized, and symbolical, rather than realistic. It should be noted, of course, that the same type of work may be produced by a normal individual.

(7) A smaller number of cases have been reported in which the artistic behavior showed no change or showed a deterioration following the onset of psychosis. In such cases, the productions became more stereotyped or mechanical, or exhibited gross technical flaws during the psychosis, and sometimes improved with recovery.

(8) A number of writers have proposed a "critical period" during which the tendency to artistic production is at its height. This period is usually placed during relatively mild or incipient stages of the psychosis.

(9) Similarly, certain writers consider some psychoses more conducive to creative activity than others. Dementia praecox, paranoia, manic depressive psychosis, and epilepsy have been most frequently proposed in this connection.

(10) The study of different forms of artistic expression, including drawing and painting, needlework, plastic art, architecture and interior decoration, music, and literary composition, has yielded results which are similar in many respects. Such characteristics as perseveration, stereotypy, flight of ideas, and incoherent or disjointed organization, for example, have been repeatedly observed in many media. It should be noted, of course, that the data in certain fields, such as music and architecture, are relatively meager.

(11) The influence of former occupation and other previous experiences is often revealed in the subject matter, style, and medium of art production. The operation of such influences is broad and varied in scope, and is not limited to those patients who have had previous training or experience in artistic work.

(12) All of the above statements should be qualified by the factor of *selection*, which may have operated in several ways in the surveys and case studies which have been considered in the present paper. In the first place, patients who draw *spontaneously* cannot be assumed to be a representative sampling of the general institutionalized population. A certain degree of selection may occur, in the second place, through the availability of

materials; those patients who have more access to the necessary materials may differ as a group from the remaining patients in education, socioeconomic level, artistic training, seriousness of disorder, and other characteristics. Thirdly, it should be noted that only those patients whose work is considered worthy of preservation can find their way into the literature. This factor may, for example, account for the relatively small number of simple, crude, and sketchy drawings reported, such drawings being less likely to attract attention and to be retained. Similarly, a fourth selection of a more stringent sort occurs before the actual publication of the case. It is characteristic of the large majority of studies on spontaneous productions that the cases were selected to illustrate some particular theory. Finally, one may recognize a fifth type of selection operating among the investigators who report the cases. Thus, those observers whose experience suggests that insane products are of little or no diagnostic or artistic value, for example, would be less likely to develop a sufficient interest in such products to write about them.

(13) The need for comparable *control data* on normal, artistically untrained adults is strongly indicated by this survey. Comparisons have frequently been made between the art of the insane and that of children, primitive people, prisoners, and other special groups. Such comparisons, however, involve many more than one variable. Prinzhorn is practically alone in calling attention to the need for such control data, although he does not himself furnish any. No investigator has obtained adequate normal control data for the spontaneous productions of the insane, and few have even recognized the need for it. Some writers have, to be sure, called attention to the need for knowledge regarding comparable pre-psychotic artistic behavior of the individual; and a few investigators report such data as well as observations made in the recovery and post-psychotic periods. These data, however, do not serve the same function as control data on normal subjects.

(14) Finally, it should be noted that the observations on spontaneous productions by the insane have frequently been described in vague, ambiguous terms and ill-defined, mentalistic concepts which add much confusion to the problem. It is difficult in certain studies to draw the line between observation and interpretation, and within the latter to distinguish between literal meanings and figures of speech. Nor is this difficulty limited to the earlier writings; in fact, some of the earliest articles examined contain more objective and intelligible accounts than a few of the most recent ones.

CHAPTER X

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